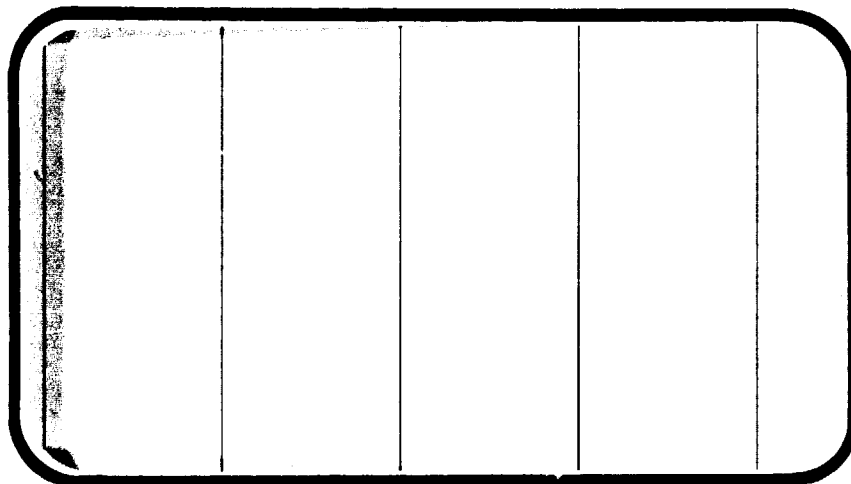


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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

CR 134100



(NASA-CR-134100) RESULTS OF TESTS OA63
AND IA29 ON AN C.O.15 SCALE MODEL OF THE
SPACE SHUTTLE CONFIGURATION 140 A/B IN
THE NASA/AAC 6- BY 6-FOOT (Chrysler
Corp.) 592 p HC \$32.75

CSCL 22B

G3/31

Unclas
41577

N74-27388

SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT

JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA Management services

SPACE DIVISION



**CHRYSLER
CORPORATION**

April, 1974

DMS-DR-2077
NASA CR-134,100

VOLUME III

RESULTS OF TESTS OA63 AND IA29
ON AN 0.015-SCALE MODEL
OF THE SPACE SHUTTLE CONFIGURATION 140 A/B
IN THE NASA/ARC 6- BY 6-FOOT TRANSONIC WIND TUNNEL

By

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Prepared under NASA Contract Number NAS9-13247

by

Data Management Services
Chrysler Corporation Space Division
New Orleans, La. 70189

for

Engineering Analysis Division
Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number: ARC 66-630
NASA Series Number: OA63 and IA29
Model Number: 36-OTS
Test Dates: 9/12/73-9/28/73

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RESULTS OF TESTS OA63 AND 1A29 ON AN 0.015-SCALE MODEL
OF THE SPACE SHUTTLE CONFIGURATION 140 A/B
IN THE NASA/ARC 6- BY 6-FOOT TRANSONIC WIND TUNNEL
By R. H. Spangler* and D. E. Thornton*

ABSTRACT

Tests were conducted in the NASA/ARC 6- by 6-Foot Transonic Wind Tunnel from September 12 to September 28, 1973 on an 0.015-scale model of the Space Shuttle configuration 140 A/B. Surface pressure data were obtained for the orbiter for both launch and entry configuration at Mach numbers from 0.6 to 2.0

The surface pressures were obtained in the vicinity of the cargo bay door hinge and parting lines, the side of the fuselage at the crew compartment and below the OMS pods at the aft compartment. Data were obtained at angles of attack and sideslip consistent with the expected divergencies along the nominal trajectory. These tests were the first in a series of tests supporting the orbiter venting analysis. The series will include tests in three facilities covering a total Mach number range from 0.6 to 10.4.

This report is published in three volumes. Volume I contains representative plotted data while the remaining volumes present the tabulated source data. Integrated Vehicle tabulated data are to be found in Volume II and Orbiter Alone data in Volume III.

* Rockwell International

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Radial Distribution of Local Pressure Field for Orbiter Alone ($90^\circ \leq \text{PHI} \leq 180^\circ$)	B	X/L, MACH, RN/L	469-540

COEFFICIENT SCHEDULE:

A: CP vs. X/L

B: CP vs. PHI

INTRODUCTION

The 0.015-scale vent pressure model (36-OTS) was tested in the NASA ARC 6- by 6-Foot Transonic Wind Tunnel over a Mach number range from 0.0 to 2.0. Test IA29 of the launch configuration started September 17 and continued through September 25 and OA63 of the entry configuration started September 25 and continued through September 28.

Pressure data were obtained to enable the evaluation of orbiter venting requirements during both launch and entry. The investigation encompassed angles of attack and side slip consistent with nominal trajectory requirements.

NOMENCLATURE General

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
a		speed of sound; m/sec, ft/sec
C_p	CP	pressure coefficient; $(p_1 - p_\infty)/q$
M	MACH	Mach number; V/a
p		pressure; N/m ² , psf
q	Q(NSM) Q(PSF)	dynamic pressure; $1/2\rho V^2$, N/m ² , psf
RN/L	RN/L	unit Reynolds number; per m, per ft
V		velocity; m/sec, ft/sec
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
ϕ	PHI	angle of roll, degrees
ρ		mass density; kg/m ³ , slugs/ft ³

Reference & C.G. Definitions

A_b		base area; m ² , ft ²
b	BREF	wing span or reference span; m, ft
c.g.		center of gravity
\bar{c} \bar{L}_{REF}	LREF	reference length or wing mean aerodynamic chord; m, ft
S	SREF	wing area or reference area; m ² , ft ²
	MRP	moment reference point
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis
	ZMRP	moment reference point on Z axis

SUBSCRIPTS

b	base
l	local
s	static conditions
t	total conditions
∞	free stream

NOMENCLATURE (Continued)

ADDITIONAL NOMENCLATURE

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
X/l	X/L	longitudinal location on orbiter fuselage, fraction of body length.
δ_{e_L}	ELEVON	left elevon deflection angle, positive trailing edge down, degrees.
ϕ	PHI	angular location on orbiter fuselage, degrees.

CONFIGURATIONS INVESTIGATED

The 0.015-scale model was a replica of the Space Shuttle Configuration 140 A/B Orbiter and Vehicle 4 external tank (ET) and solid rocket boosters (SRB). Though the attach points for the SRB and ET were in the proper location no attempt was made to simulate the actual attach configuration. Also, the external feed and vent lines on the ET were not simulated.

The orbiter was instrumented with 176 pressure taps on the left side of the fuselage. The orifices were located at the cargo bay door hinge and parting lines, on the side of the fuselage by the crew compartment and below the OMS pod at the aft compartment. The ET and SRB's were not instrumented.

The pressures were measured by four ± 10 psid Stathan PM 131 TC differential pressure transducers housed in four type S scanivalve pressure multiplexors driven by a single solenoid type stepper. Reference and calibration pressures were measured by the facility Exactel micro-manometers. Reference pressures were generally set equal to free stream static pressure.

Two configurations were tested. During launch vehicle testing the SRB's were attached to the tank and the ET to the orbiter. All control surfaces were set at 0° deflection. For entry configuration testing the SRB's and ET were replaced with appropriate off blocks. The left elevon was set at -15° . All other control surfaces remained at 0° deflection.

During the course of the test some pressure orifices or associated tubing developed leaks or became plugged. The following list presents these discrepancies and the effected runs.

IA29

Runs 1-24	leaks: P144, 204, 212, 428, 445 pinched: 308, 312
25-49	same leaks pinched: P211, P226
50-86	same leaks pinched: 211, 226, 404, 422
87	reference pressure leak
88	same leaks plus 426, 427, 429
89-99	same leaks pinched: 130, 402
100-111	same leaks pinched: 130, 210, 211, 402

OA63

112-199 same leaks

The model was sting supported from the orbiter base in an inverted position. Sting adapters were used to provide necessary sideslip angles. Leak and continuity checks of the instrumentation were made. Due to an installation error, the dangleometer mounted in the model could not be used. Installation photographs are shown as figure 3.

Test IA29 was conducted as planned except for the omission of $M = 1.0$ testing due to difficulties in setting this tunnel condition and the questionable resulting data. Other data at Mach numbers close to $M = 1$ were obtained but should be utilized only after qualitative evaluation of the Schlieren photos (figures 4 and 5).

TEST FACILITY DESCRIPTION

The 6- by 6-Foot Wind Tunnel of the NASA Ames Research Center is a closed-circuit, variable pressure facility. The test section has a slotted floor and ceiling, allowing for continuous operation from Mach number 0.25 to 2.20 at stagnation pressures from 0.3 to 1.0 atmosphere for a stagnation temperature of 560°R. These conditions allow Reynolds number variation from 1 to 5 million per foot and a dynamic pressure range from 200 to 1000 pounds per square foot.

TABLE I.

TEST : IA29/OA63		DATE : SEPT., 1973	
TEST CONDITIONS			
MACH NUMBER	REYNOLDS NUMBER (per unit length)	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
2.0	2.5×10^6 /Ft	3.58	90
1.75	3.0×10^6 /Ft	4.40	90
1.75	2.5×10^6 /Ft	3.59	90
1.50	4.0×10^6 /Ft	5.70	90
1.50	3.5×10^6 /Ft	4.85	80
1.40	4.3×10^6 /Ft	5.95	90
1.40	4.0×10^6 /Ft	5.52	90
1.40	3.5×10^6 /Ft	4.79	80
1.25	4.0×10^6 /Ft	5.45	90
1.25	3.5×10^6 /Ft	4.69	80
1.15	4.0×10^6 /Ft	5.25	90
1.15	3.5×10^6 /Ft	4.53	80
1.10	4.0×10^6 /Ft	5.20	90
1.10	3.5×10^6 /Ft	4.49	80
1.05	4.0×10^6 /Ft	5.04	85
1.05	3.5×10^6 /Ft	4.34	80

BALANCE UTILIZED: None

	CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:
NF	<u> </u>	<u> </u>	<u> </u>
SF	<u> </u>	<u> </u>	<u> </u>
AF	<u> </u>	<u> </u>	<u> </u>
PM	<u> </u>	<u> </u>	<u> </u>
RM	<u> </u>	<u> </u>	<u> </u>
YM	<u> </u>	<u> </u>	<u> </u>

COMMENTS: Model was instrumented with pressure transducers

TABLE I. - Concluded.

TEST : 1A29/OA63		DATE : SEPT., 1973	
TEST CONDITIONS			
MACH NUMBER	REYNOLDS NUMBER (per unit length)	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
0.95	$4.0 \times 10^6 / \text{Ft}$	4.63	80
0.95	$3.5 \times 10^6 / \text{Ft}$	4.13	80
0.85	$4.0 \times 10^6 / \text{Ft}$	4.38	80
0.85	$3.5 \times 10^6 / \text{Ft}$	3.87	80
0.75	$4.0 \times 10^6 / \text{Ft}$	4.01	80
0.75	$3.5 \times 10^6 / \text{Ft}$	3.52	80
0.60	$3.5 \times 10^6 / \text{Ft}$	2.95	80
2.0	$2.25 \times 10^6 / \text{Ft}$	3.12	80
1.75	$2.25 \times 10^6 / \text{Ft}$	3.18	80

BALANCE UTILIZED:

None

CAPACITY:

ACCURACY:

COEFFICIENT TOLERANCE:

NF

SF

AF

PM

RM

YM

COMMENTS:

Model was instrumented with pressure transducers

TABLE II.

[illegible]

TABLE II. - Continued.

[illegible]

TABLE II. - Continued.

[illegible]

TABLE II. - Continued.

TEST:		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE: SEPT 12 - 1973												
DATA SET IDENTIFIER	CONFIGURATION	SCHD.				PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)				TEST RUN NUMBERS									
		α	β	Σa	Σb	Σa	Σb	RN	1.75		2.0													
REB001	$\phi_1 + T_{12} + S_{12} N_{25}$	A	0	0	0	0	0	0	0	0	1	1												
02								3.0			2													
03								3.5																
04								4.0																
05								4.3																
06								2.5			14	13												
07								3.5																
08								4.0																
09								2.5			26	25												
10								3.5																
11								4.0																
12								4.0																
13								2.5			38	37												
14								3.5																
15								4.0																
16		A2						4.0																
17		A3	-4					2.5				52												
18		A3						2.5			50	47												
1													7	13	19	25	31	37	43	49	55	61	67	73
SCHEDULES		COEFFICIENTS										MARKING												
α OR β																								

TABLE II. - Continued.

[illegible]

TABLE II. - Concluded.

[illegible]

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR.

TABLE III. - MODEL DIMENSIONAL DATA

MODEL COMPONENT: BODY - B₂₆

GENERAL DESCRIPTION: Orbiter Fuselage Configuration 140 A/B

NOTE: B₂₆ identical to B₂₄ except underside of fuselage refaired to accept W₁₁₆.

Model Scale = 0.015

DRAWING NUMBER: VL70-000200
VL70-000140A/B

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
*Length (body nose $X_0 = 235$) - in.	<u>1293.3</u>	<u>19.3995</u>
Max. Width (at $X_0 = 1520$) - in.	<u>262.0</u>	<u>3.93000</u>
Max. Depth (at $X_0 = 1464$) - in.	<u>250.0</u>	<u>3.75000</u>
Fineness Ratio	<u>4.92481</u>	<u>4.92481</u>
Area - ft ²		
Max. Cross-Sectional	<u>340.88462</u>	<u>0.07670</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>
* NOTE: Theoretical body length used in		
data reduction - in.	<u>1290.3</u>	<u>19.35450</u>

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR.

TABLE III. - Continued.

MODEL COMPONENT: CANDY - Co

GENERAL DESCRIPTION: Configuration 3A

Model Scale = 0.015

DRAWING NUMBER

VL70-000140A

VL70-000142A

DIMENSION:

FULL SCALE

MODEL SCALE

Length ($X_0=434.643$ to 670)

235.357

3.53036

Max Width ($X_0=513.127$)

152.412

2.28618

Max Depth ($X_0=485.0$)

25.000

0.37500

Fineness Ratio

Area

Max Cross-Sectional

Platform

Wetted

Base

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR.

TABLE III. - Continued.

MODEL COMPONENT: ELEVON - E26

GENERAL DESCRIPTION: Configuration 4

Data for (1) of (2) sides. Identical to 135 except

airfoil thickness

Model Scale = 0.015

DRAWING NUMBER:

VL70-000200
VL70-000240 A/B

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>223.5814</u>	<u>0.05031</u>
Span (equivalent)	<u>368.34</u>	<u>5.52510</u>
Inb'd equivalent chord	<u>119.623</u>	<u>1.79434</u>
Outb'd equivalent chord	<u>55.1922</u>	<u>0.82788</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.2096</u>	<u>0.2096</u>
At Outb'd equiv. chord	<u>0.4004</u>	<u>0.4004</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.00</u>	<u>0.00</u>
Tailing Edge	<u>-10.056</u>	<u>-10.056</u>
Hingeline	<u>0.00</u>	<u>0.00</u>
Area Moment (Normal to hinge line)	<u>851.1502</u>	<u>0.00287</u>

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR.

TABLE III. - Continued.

MODEL COMPONENT: Body Flap - F₈

GENERAL DESCRIPTION: Configuration A

MODEL SCALE: 0.015.

Model Scale -

DRAWING NUMBER

VL70-000140A/B, VL70-000200

<u>DIMENSION:</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Length in.	94.856	1.42284
Max Width in.	262.308	3.943462
Max Depth in.	23.000	0.34500
Fineness Ratio		
Area - ft ²		
Max Cross-Sectional		
Planform	158.85350	0.03574
Wetted		
Base	41.89642	0.00943

TABLE III. - Continued.

MODEL COMPONENT: OMS POD - M₇GENERAL DESCRIPTION: Configuration 3AMODEL SCALE: 0.015DRAWING NUMBER: VL70-000140A/B
VL70-000145

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length (OMS Fwd Sta. $X_0 = 1233.0$) IN.	<u>327.000</u>	<u>4.9050</u>
Max. Width (@ $X_0 = 1450.0$) - IN.	<u>94.5</u>	<u>1.4175</u>
Max. Depth (@ $X_0 = 1493.0$) - IN.	<u>109.000</u>	<u>1.6350</u>
Fineness Ratio	<u> </u>	<u> </u>
Area		
Max. Cross-Sectional	<u> </u>	<u> </u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

TABLE III. - Continued.

MODEL COMPONENT: BCRM NOZZLES - N25GENERAL DESCRIPTION: Configuration 3A BCRM NozzlesModel Scale = 0.015DRAWING NO. VL72-000088A
VL77-000036B

DIMENSIONS	FULL-SCALE	MODEL SCALE
MACH NO. _____		
DIAMETER D _{LX} ~ IN (One Nozzle)	<u>141.3</u>	<u>2.11950</u>
DIAMETER D _T ~ IN	_____	_____
DIAMETER D _{IN} ~ IN	_____	_____
ON ~ DEGREES	_____	_____
AREA - FT ² (One Nozzle)		
MAX CROSS-SECTIONAL	<u>108.89595</u>	<u>0.02450</u>
GIMBAL ORIGIN	<u>X_o</u>	<u>Y_o</u> <u>Z_o</u>
LEFT NOZZLE ~ IN. F.S.	<u>1825.3</u>	<u>-243</u> <u>400</u>
RIGHT NOZZLE ~ IN. FS	<u>1825.3</u>	<u>+243</u> <u>400</u>
NULL POSITION - DEG.	<u>PITCH</u>	<u>YAW</u>
LEFT NOZZLE	<u>+8</u>	<u>+8</u>
RIGHT NOZZLE	<u>+8</u>	<u>+8</u>

TABLE III. - Continued.

MODEL COMPONENT: RUDDER - R5GENERAL DESCRIPTION: 3A Configuration RudderModel Scale = 0.015DRAWING NUMBER: VL70-000146A

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - FT ²	<u>106.38</u>	<u>0.02394</u>
Span (equivalent) - IN.	<u>201.0</u>	<u>3.01500</u>
Inb'd equivalent chord	<u>91.585</u>	<u>1.37378</u>
Outb'd equivalent chord	<u>50.833</u>	<u>0.76249</u>
Ratio movable surface chord; total surface chord		
At Inb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>34.83</u>	<u>34.83</u>
Tailing Edge	<u>26.25</u>	<u>26.25</u>
Hingeline	<u>34.53</u>	<u>34.83</u>
Area Moment (Normal to hinge line)- FT ³	<u>526.13</u>	<u>0.00178</u>
Product of Area and Mean Chord		

TABLE III. - Continued.

MODEL COMPONENT: BOOSTER SOLID ROCKET MOTOR - S12GENERAL DESCRIPTION: Configuration 3A, Data for (1) of (2) sides.Model Scale = 0.015DRAWING NUMBER VL72-000088A
VL77-000036A

<u>DIMENSION:</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Length (Includes Nozzle) - IN.	<u>1741.0</u>	<u>26.115</u>
Max Width (Tank Dia) - IN.	<u>142.3</u>	<u>2.1345</u>
Max Depth (Aft Shroud) - IN.	<u>192.0</u>	<u>2.880</u>
Fineness Ratio	<u>9.06771</u>	<u>9.06771</u>
Area - FT ²		
Max Cross-Sectional	<u>201.06193</u>	<u>0.04524</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>
WP of BSRM Centerline (Z _T) - IN.	<u>400</u>	<u>6.000</u>
FS of BSRM Nose (X _T) - IN.	<u>200</u>	<u>3.000</u>

TABLE III. - Continued.

MODEL COMPONENT: EXTERNAL TANK - T12

GENERAL DESCRIPTION: External Oxygen Hydrogen Tank

NOTE: Identical to T11 with external fuel lines added

Model Scale = 0.015

DRAWING NUMBER VL72-000088A
VL78-000041 B

<u>DIMENSION:</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Length -- IN. (Nose @ $X_T = 309$)	<u>1865</u>	<u>27.975</u>
Max Width (Dia) - IN.	<u>324</u>	<u>4.860</u>
Max Depth	<u> </u>	<u> </u>
Fineness Ratio	<u>5.75617</u>	<u>5.75617</u>
Area - FT ²		
Max Cross-Sectional	<u>572.555</u>	<u>0.12882</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>
WP of Tank Centerline (Z_T) - IN.	<u>400.0</u>	<u>6.000</u>

TABLE III. - Continued.

MODEL COMPONENT: VERTICAL - V

GENERAL DESCRIPTION: Configuration 3A

NOTE: Similar to V5 with radius on TE upper corner and LE lower corner
where vertical meets fuselage.

Model Scale = 0.015

DRAWING NUMBER:

VL70-000170A/B
VL70-000170A

DIMENSIONS:

FULL-SCALE

MODEL SCALE

TOTAL DATA

Area (Theo) Ft ²	413.253	0.09298
Planform		
Span (Theo) In	315.720	4.73580
Aspect Ratio	1.675	1.675
Rate of Taper	0.507	0.507
Taper Ratio	0.40399	0.40399
Sweep Back Angles, degrees		
Leading Edge	45.00	45.00
Trailing Edge	25.947	25.947
0.25 Element Line	41.130	41.130
Chords:		
Root (Theo) WP	268.500	4.02750
Tip (Theo) WP	108.490	1.62705
MAC	199.80756	2.99711
Fus. Sta. of .25 MAC	1463.50	21.95250
W. P. of .25 MAC	625.120	9.53283
B. L. of .25 MAC	0.00	0.00
Airfoil Section		
Leading Wedge Angle Deg	10.00	10.00
Trailing Wedge Angle Deg	10.920	10.920
Leading Edge Radius (in) - IN.	2.00	0.0300
Void Area	13.17	0.00296
Blanketed Area	0.00	0.00

TABLE III. - Concluded.

MODEL COMPONENT: WING-W₁₁₆GENERAL DESCRIPTION: Configuration 4NOTE: Identical to W₁₁₄ except airfoil thickness. Dihedral angle is along
trailing edge of wing.

Model Scale = 0.015

TEST NO.	DWG. NO.	VL70-000140A/B VL70-000200
DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo.) Ft ²		
Planform	2690.00	0.60525
Span (Theo In.	936.6816	14.05022
Aspect Ratio	2.265	2.265
Rate of Taper	1.177	1.177
Taper Ratio	0.200	0.200
Dihedral Angle, degrees(at X ₀ =1506.623,Y ₀ =	3.500	3.500
Incidence Angle, degrees 105, Z ₀ = 282.75)	0.500	0.500
Aerodynamic Twist, degrees	+3.000	+3.000
Sweep Back Angles, degrees		
Leading Edge	45.00	45.00
Trailing Edge	-10.056	-10.056
0.25 Element Line	35.209	35.209
Chords:		
Root (Theo) B.P.O.O.	689.2429	10.33864
Tip, (Theo) B.P.	137.8486	2.06773
MAC	474.8117	7.12218
Fus. Sta. of .25 MAC	1126.721	17.05082
W.P. of .25 MAC	291.00	4.36500
B.L. of .25 MAC	187.33491	2.81002
EXPOSED DATA		
Area (Theo) Ft ²	1812.2205	0.40775
Span, (Theo) In. BP108	736.6816	11.05022
Aspect Ratio	2.058	2.058
Taper Ratio	0.2451	0.2451
Chords		
Root BP108	570.6230	8.55934
Tip 1.00 $\frac{b}{2}$	137.8512	2.06777
MAC	354.2376	5.31356
Fus. Sta. of .25 MAC	1164.237	17.46356
W.P. of .25 MAC	292.00	4.38000
B.L. of .25 MAC	239.67786	3.59517
Airfoil Section (Rockwell Mod NASA)		
XXXX-64		
Root $\frac{b}{2}$ = 0.425	0.113	0.113
Tip $\frac{b}{2}$ = 1.00	0.12	0.12
Data for (1) of (2) Sides		
Leading Edge Cuff		
Planform Area Ft ²	118.333	0.02662
Leading Edge Intersects Fus M. L. @ Sta	505.0	7.57500
Leading Edge Intersects Wing @ Sta	1003.5	15.05250

TABLE IV. - PPESSUPE TAP LAYOUT

$X_o.$	X/L	$\phi=60$	$\phi=70$	$\phi=80$	$\phi=90$	$\phi=100$	$\phi=110$	$\phi=120$	$\phi=130$	$\phi=140$	$\phi=150$	$\phi=160$	$\phi=170$	$\phi=180$
350	.087	107	103	104										
400	.126	107	106	107										
450	.164	108	109	110	111									
500	.203				112									
550	.242				113									
578	.264				114									
602	.282				115									
626	.301				127	115	116	117	118	119	120	121	122	123
650	.319				130	127	128							129
674	.338				134	131	132							133
698	.357				138	135	136							137
722	.375				142	139	140							141
746	.394				146	143	144							145
760	.405				204	147	202							203
794	.431				208	205	206							207
818	.450				218	209	210	211	212	213	214	215	216	217
842	.468				222	219	220							221
866	.486				228	223	226							227
890	.505				232	229	230							231
914	.524				236	233	234							235
					240	237	238							239
						241	242							243

TABLE IV. - PPESSUPE TAP LAYOUT - Concluded.

X_0	Y/L	$\phi=60$	$\phi=70$	$\phi=80$	$\phi=90$	$\phi=100$	$\phi=110$	$\phi=120$	$\phi=130$	$\phi=140$	$\phi=150$	$\phi=160$	$\phi=170$	$\phi=180$
942	.546				244	245	246	247	302	303	304	305	306	307
962	.561				308	309	310							311
986	.580				312	313	314							315
1010	.598				316	317	318							319
1034	.617				320	321	322							323
1058	.636				326	327	328							329
1082	.654				330	331	332							333
1106	.673				334	335	336							337
1125	.688				338	339	340	341	342	343	344	345	346	347
1154	.710				402	403	404							405
1178	.729				406	407	408							409
1202	.747				410	411	412							413
1226	.767				414	415	416							417
1250	.785				418	419	420							421
1274	.803				422	423	426							427
1307	.829		439		428	429	430	431	432	433	434	435	436	437
1350	.862	438	440	440	441									
1400	.900		442	443	444									
1450	.940		445	446	447									

ϕ in degrees, measured clockwise from bottom centerline (looking forward) about FRL at $Z_0 = 450$, $\gamma_0 = 0.0$

Notes:

1. Positive directions of force coefficients, moment coefficients, and angles are indicated by arrow
2. For clarity, origins of wind and stability axes have been displaced from the center of gravity

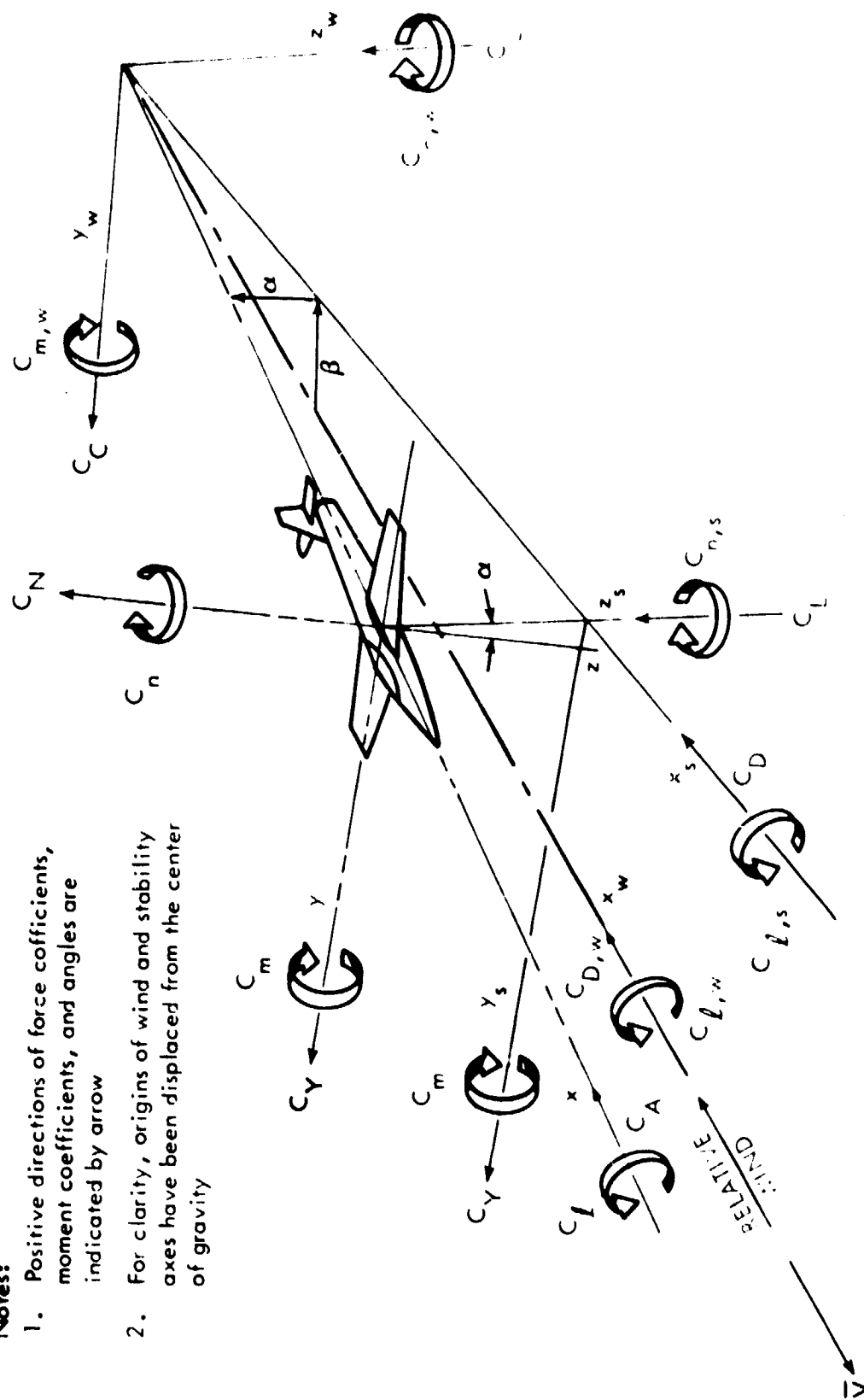
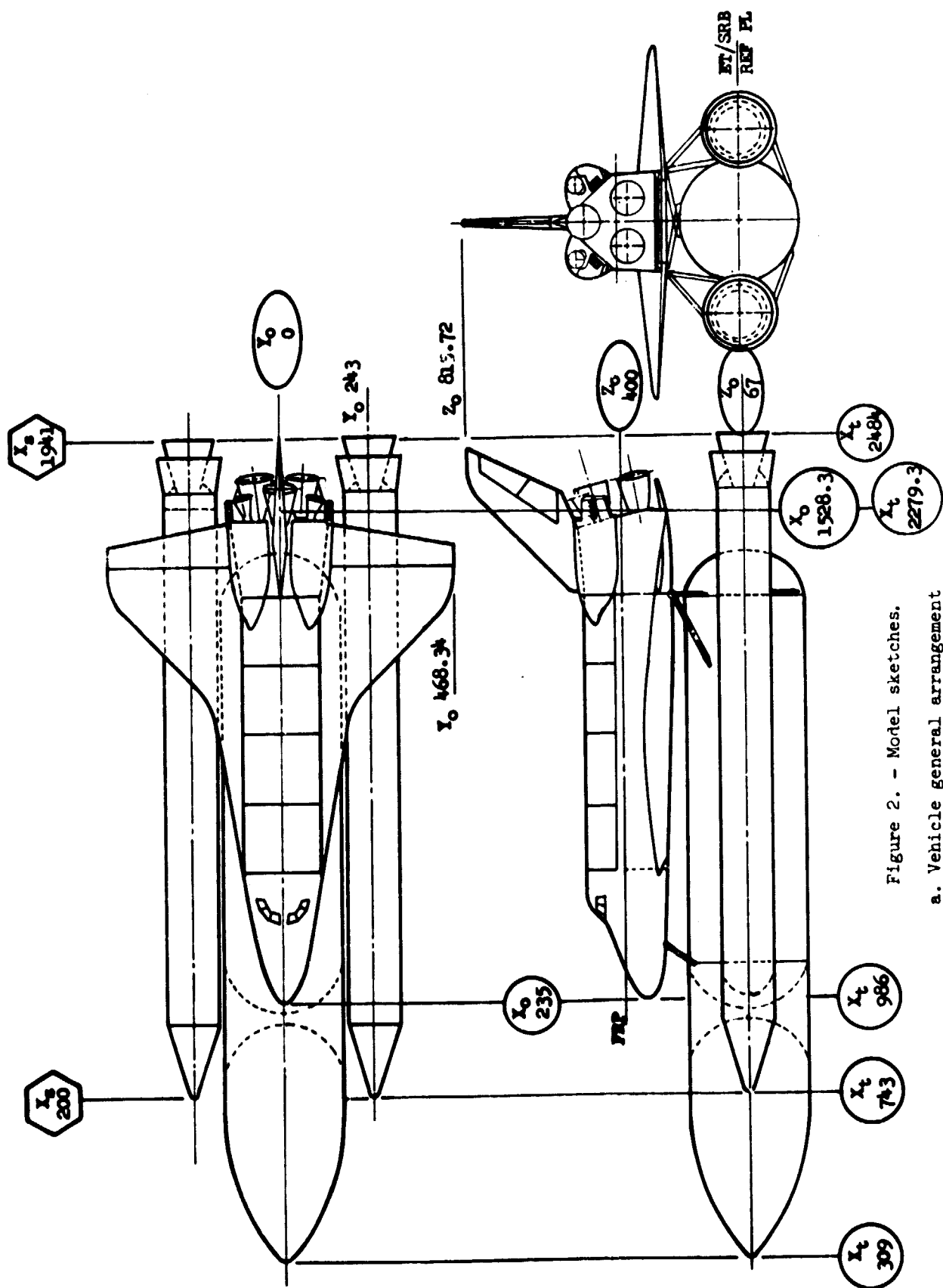
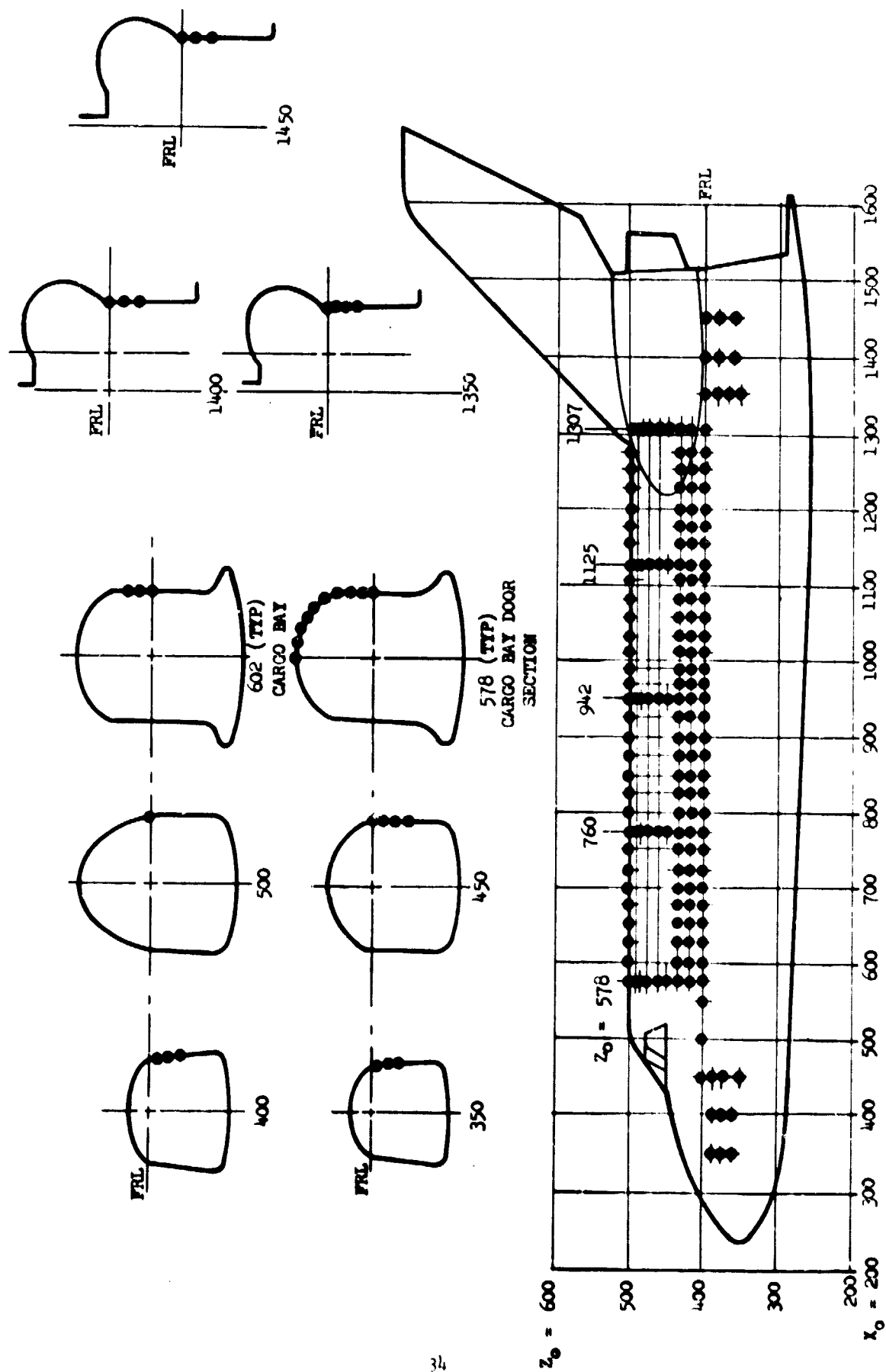


Figure 1. - Axis systems.







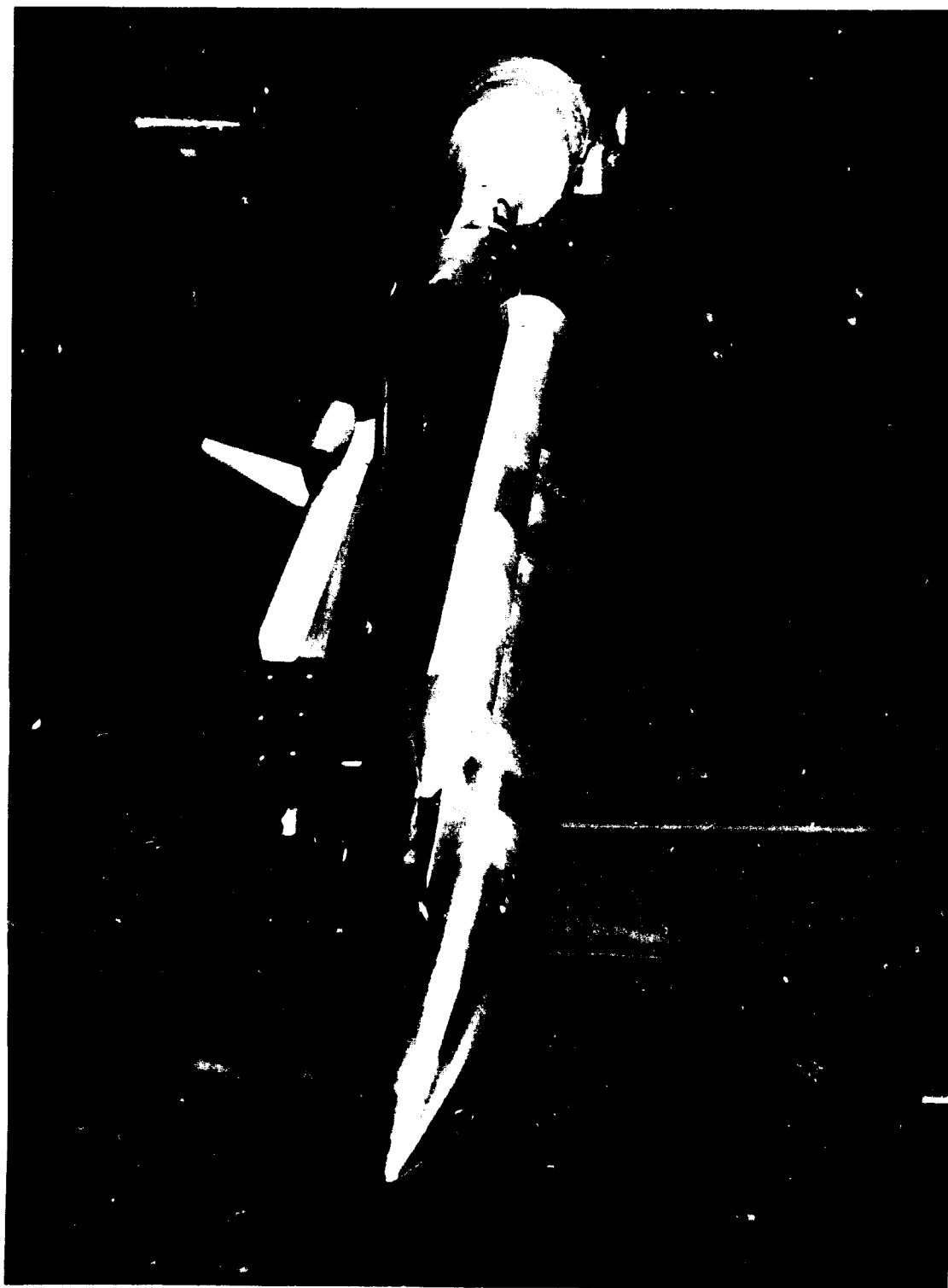
(a) One-quarter view model 36-0 installed in APC 6- by 6-foot Wind Tunnel.

Figure 3. - Model photographs.



(b) Three-quarter view model 36-CTC installed in APO 6- by 6-Foot Mini Tunnel.

Figure 3. - Continued.



(c) One-quarter view model 36-OTS installed in ARC 6- by 6-Foot Wind Tunnel.

Figure 3. - Continued.



(a) Three-quarter view model 36-0 installed in APO 6- by 6-foot wind tunnel.

Figure 3. - Concluded.



a. Mach = 2.0, $\alpha = 0^\circ$, $\beta = -4^\circ$

Figure 6. - Schlieren Photographs - Test 1A.9



b. Mach = 1.4, $\alpha = 0^\circ$, $\beta = -4^\circ$

Figure 4. - Continued.



c. Mach = 1.25, $\alpha = 0^\circ$, $\beta = -4^\circ$

Figure 4. - Continued.



d. Mach = 1.15, $\alpha = 0^\circ$, $\beta = -4^\circ$

Figure 4. - Continued.



e. Mach = 1.10, $\alpha = 0^\circ$, $\beta = -4^\circ$

Figure 4. - Continued.



f. Mach = 1.05, $\alpha = 0^\circ$, $\beta = -4^\circ$

Figure 4. - Continued.



g. Mach = 0.95, $\alpha = 0^\circ$, $\beta = -4^\circ$

Figure 4. - Continued.



h. Mach = 0.86, $\alpha = 0^\circ$, $\beta = -4^\circ$

Figure 4. - Concluded.



a. Mach = 2.0, $\alpha = 6^\circ$, $\beta = 0^\circ$

Figure 10. - Schlieren Photographs - Test 0A63



b. Mach = 1.5, $\alpha = 6^\circ$, $\beta = 0^\circ$

Figure 5. - Continued.



c. Mach = 1.5, $\alpha = 6^\circ$, $\beta = 0^\circ$

(Image b) is continued.



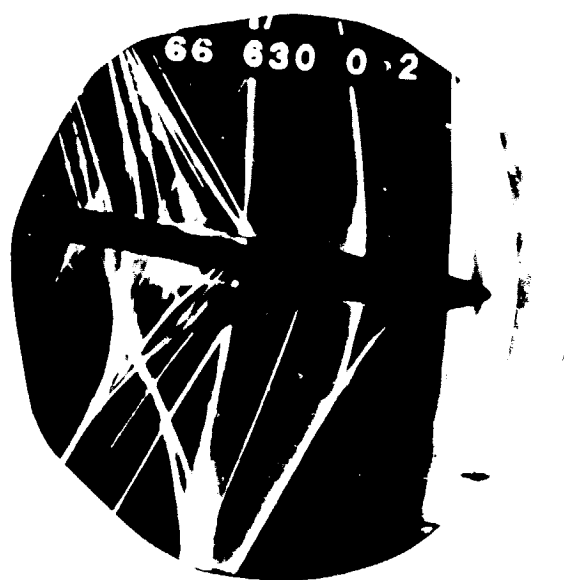
1. Mach = 1.25, $\alpha = 6^\circ$, $\beta = 0^\circ$

Figure 1. - Continued.



c. Mach = 1.15, $\alpha = 6^\circ$, $\beta = 0^\circ$

Figure 5. - Continued.



c. Mach = 1.10, $\alpha = 6^\circ$, $\beta = 0^\circ$

Figure 5. - Continued.



g. Mach = 1.05, $\alpha = 6^\circ$, $\beta = 0^\circ$

Figure 5. - Continued.



h. Mach = 0.05, $\alpha = 0^\circ$, $\beta = 0^\circ$

Figure 5. - Concluded.

APPENDIX

ORBITER ALONE DATA ONLY
(SEE VOLUME II FOR INTEGRATED VEHICLE DATA)

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0A63

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC001) (16 OCT 75)

REFERENCE DATA

SREF = .0000 50. IN. XMRP = .0000 IN.
 LREF = .0000 50. IN. YMRP = .0000 IN.
 SREF = .0000 50. IN. ZMRP = .0000 IN.
 SCALE = .0130 SCALE

MACH (1) = 1.753 ALPHA (1) = 6.321

PARAMETRIC DATA

BETA = .000 ELEVTR = -15.000
 AIRLON = .000 RUDDER = .000
 RW/L = 2.250

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0670	.1260	.1640	.2030	.2420	.2810	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
PHI														
90.000	.1706	.1412	.0895											
70.000	.1772	.1486	.1035											
50.000	.1801	.1589	.1174											
30.000		.1430	.0747	-.0396	-.0771	-.0770	.0000	-.0639	-.0758	-.0697	-.0735	-.0697	-.0937	-.0934
100.000					-.0771	-.0846	-.0669	-.0639	-.0645	-.0666	-.0976	-.0934	-.1075	-.1032
110.000					-.1174	-.1147	-.1144	-.1147	-.1263	-.1260	-.1240	-.1219	-.1355	-.1167
120.000							-.0965						-.1266	
130.000							-.1910						-.1153	
140.000							-.2377						-.1156	
150.000							-.2369						-.1162	
160.000							-.2227						-.1162	
170.000							-.2311						-.1294	
180.000							-.2311	-.1619	-.1425	-.1257	-.1248	-.1217	-.1271	-.1231

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.0673	-.0901	-.0667	-.0652	-.0635	-.0684	-.0663	.0000	-.0872	-.0798	-.0611	-.0520	-.0581	-.0701	.0000
100.000	-.1023	-.1084	-.0991	-.0853	-.0667	-.0681	-.0918	-.0901	-.0836	-.0924	-.0666	-.0579	-.0464	-.0523	-.0722
110.000	-.1132	-.1083	-.0966	-.0959	-.0913	-.0936	-.0924	-.0927	-.0910	-.0848	-.0789	-.0675	-.0479	-.0473	-.0637
120.000						-.0658								-.0494	
130.000						-.0763								-.0456	
140.000						-.0670								-.0421	
150.000						-.0596								-.0382	
160.000						-.0538								-.0353	
170.000						-.0474								-.0350	
180.000	-.1089	-.0933	-.0772	-.0646	-.0570	-.0497	-.0459	-.0412	-.0392	-.0389	-.0321	-.0356	-.0327	-.0336	-.0337

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PHI									
90.000									
70.000									
50.000									
30.000									
100.000	-.0947	-.0410	-.1234	-.1389	-.0632	.0000			
110.000	-.0943	-.1054	-.1249	-.0611	-.0127	-.0115			
120.000	-.0821	-.1024	-.0427	.0465	.0352	.0103			
130.000						.1944			

X/L	.9649	.9974	.0773	.0000	.0291	.1286
PHI						
90.000						
70.000						
50.000						
30.000						
100.000						
110.000						
120.000						

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (1) = 1.753 ALPHA (1) = 6.321

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PHI									
130.000							.2646		
140.000							.1869		
150.000							.2330		
160.000							.2625		
170.000							.2701		
180.000							.2646		
190.000							.3965		

MACH (1) = 1.750 ALPHA (2) = 6.405

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4090	.4310
PHI															
60.000	.1636	.1348	.0854												
70.000	.1559	.1368	.0944												
80.000	.1522	.1397	.1115												
90.000			.1391	.0596	-.0054	-.0845	-.0595	.0000	-.0465	-.0633	-.0578	-.0618	-.0639	-.0996	-.0901
100.000						-.0616	-.0702	-.0705	-.0726	-.0792	-.0908	-.0941	-.0941	-.1068	-.1074
110.000						-.0975	-.0969	-.0958	-.1024	-.1151	-.1209	-.1233	-.1293	-.1236	-.1360
120.000						-.0792								-.1241	
130.000						-.1940								-.1437	
140.000						-.2644								-.1336	
150.000						-.2467								-.1322	
160.000						-.2343								-.1325	
170.000						-.2398								-.1400	
180.000						-.2369	-.1965	-.1617	-.1473	-.1464	-.1444	-.1437	-.1429	-.1391	-.1236

X/L	.4500	.4660	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100	
PHI															
90.000	-.0878	-.0935	-.0981	-.0990	-.1024	-.1111	-.1143	.0000	-.1137	-.1067	-.0876	-.0771	-.0891	-.0993	.0000
100.000	-.1097	-.1206	-.1194	-.1148	-.1145	-.1209	-.1225	-.1213	-.1108	-.1137	-.0908	-.0806	-.0718	-.0762	-.0982
110.000	-.1422	-.1382	-.1362	-.1292	-.1275	-.1290	-.1243	-.1243	-.1137	-.1082	-.1008	-.0653	-.0680	-.0683	-.0915
120.000						-.1114								-.0633	
130.000						-.0990								-.0745	
140.000						-.0763								-.0555	
150.000						-.0616								-.0446	
160.000						-.0558								-.0402	
170.000						-.0493								-.0370	
180.000	-.1088	-.0903	-.0722	-.0612	-.0543	-.0491	-.0467	-.0429	-.0406	-.0361	-.0356	-.0350	-.0350	-.0371	

X/L

PHI

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECOG1)

$$\text{MACH} (1) = 1.750 \quad \text{ALPHA} (2) = 0.455$$

DEPENDENT VARIABLE CP

K/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
-----	-------	-------	-------	-------	-------	-------	-------	-------	-------

III

60.000							- .1390	
70.000							- .1320	.0000
80.000							- .1193	- .0412
90.000							- .0930	- .1332
100.000	- .1174	- .0906	- .1332	- .1701	- .1285	.0000		
110.000	- .1302	- .1253	- .1503	- .1090	- .0436	- .0456		
120.000	- .1103	- .1273	- .0672	.0199	.0271	- .0243		
130.000						.1766		
140.000						.2456		
150.000						.1506		
160.000						.2271		
170.000						.2566		
180.000	- .0962	- .1125	- .0211	.1456	.2775	.4743		

$$\text{MACM} (1) = 1.750 \quad \text{ALPHA} (3) = 10.450$$

DEPENDENT VARIABLE CP

W/L	.0970	.1260	.1640	.2030	.2420	.2810	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
-----	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

3

[illegible]

7/8

[illegible]

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD 11)

MACH (1) = 1.750 ALPHA (3) = 10.450

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.4500	.4600	.4800	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
60.000															
70.000															
80.000															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

PHI															
60.000															
70.000															
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180.000															

PHI															
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PHI															
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120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

MACH (1) = 1.750 ALPHA (4) = 12.550

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
60.000															
70.000															
80.000															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

PHI															
60.000															
70.000															
80.000															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

PHI															
60.000															
70.000															
80.000															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

PHI

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

$$\text{MACM} (1) = 1.750 \quad \text{ALPHA} (4) = 12.550$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE OF

Year	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	2075	2080	2085	2090	2095	2100
Population (millions)	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5
GDP (trillions of dollars)	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5
Life expectancy (years)	45	48	51	54	57	60	63	66	69	72	75	78	81	84	87	90	93	96	99	102	105	108	111	114	117	120	123	126	129	132	135

133

90,000	-.0875	-.0947	-.1002	-.1054	-.1097	-.1227	-.1237	.0000	-.1313	-.1342	-.1225	-.1193	-.1210	-.1342	.0000
100,000	-.1117	-.1230	-.1250	-.1290	-.1285	-.1391	-.1430	-.1468	-.1415	-.1562	-.1409	-.1333	-.1219	-.1172	-.1419
110,000	-.1550	-.1578	-.1616	-.1625	-.1640	-.1709	-.1711	-.1723	-.1683	-.1647	-.1567	-.1395	-.1190	-.1102	-.1236
120,000						-.2064								-.1028	
130,000						-.2056								-.1234	
140,000						-.0982								-.1106	
150,000						-.0786								-.0742	
160,000						-.0687								-.0564	
170,000						-.0555								-.0462	
180,000	-.0976	-.0848	-.0691	-.0650	-.0584	-.0540	-.0532	-.0506	-.0502	-.0494	-.0435	-.0436	-.0417	-.0420	-.0494

72

Wavelength, Å	Intensity, %	Wavelength, Å	Intensity, %
10.25	100	10.35	100
10.35	100	10.45	100
10.45	100	10.55	100
10.55	100	10.65	100
10.65	100	10.75	100
10.75	100	10.85	100
10.85	100	10.95	100
10.95	100	11.05	100
11.05	100	11.15	100
11.15	100	11.25	100
11.25	100	11.35	100
11.35	100	11.45	100
11.45	100	11.55	100
11.55	100	11.65	100
11.65	100	11.75	100
11.75	100	11.85	100
11.85	100	11.95	100
11.95	100	12.05	100
12.05	100	12.15	100
12.15	100	12.25	100
12.25	100	12.35	100
12.35	100	12.45	100
12.45	100	12.55	100
12.55	100	12.65	100
12.65	100	12.75	100
12.75	100	12.85	100
12.85	100	12.95	100
12.95	100	13.05	100
13.05	100	13.15	100
13.15	100	13.25	100
13.25	100	13.35	100
13.35	100	13.45	100
13.45	100	13.55	100
13.55	100	13.65	100
13.65	100	13.75	100
13.75	100	13.85	100
13.85	100	13.95	100
13.95	100	14.05	100
14.05	100	14.15	100
14.15	100	14.25	100
14.25	100	14.35	100
14.35	100	14.45	100
14.45	100	14.55	100
14.55	100	14.65	100
14.65	100	14.75	100
14.75	100	14.85	100
14.85	100	14.95	100
14.95	100	15.05	100
15.05	100	15.15	100
15.15	100	15.25	100
15.25	100	15.35	100
15.35	100	15.45	100
15.45	100	15.55	100
15.55	100	15.65	100
15.65	100	15.75	100
15.75	100	15.85	100
15.85	100	15.95	100
15.95	100	16.05	100
16.05	100	16.15	100
16.15	100	16.25	100
16.25	100	16.35	100
16.35	100	16.45	100
16.45	100	16.55	100
16.55	100	16.65	100
16.65	100	16.75	100
16.75	100	16.85	100
16.85	100	16.95	100
16.95	100	17.05	100
17.05	100	17.15	100
17.15	100	17.25	100
17.25	100	17.35	100
17.35	100	17.45	100
17.45	100	17.55	100
17.55	100	17.65	100
17.65	100	17.75	100
17.75	100	17.85	100
17.85	100	17.95	100
17.95	100	18.05	100
18.05	100	18.15	100
18.15	100	18.25	100
18.25	100	18.35	100
18.35	100	18.45	100
18.45	100	18.55	100
18.55	100	18.65	100
18.65	100	18.75	100
18.75	100	18.85	100</

三

90,000	-1,493	-2048	-2196	-2054	.0000	-2234
70,000	-1,656	-1859	-2033	-1774	-1036	-2321
50,000	-1,521	-1640	-1406	-0432	-0112	-1696
30,000					-0859	-1310
10,000					.1227	-1036
					.1569	
					.0491	-2420
					.2247	-2126
					.3224	
					.2891	-2132
90,000	-1,390	-1495	-0409	-0223	.2647	
70,000					.6761	

$$\text{MACH (1)} = 1.750 \quad \text{ALPHA (5)} = 14.500$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

R/L	.0970	.1260	.1640	.2030	.2420	.2840	.3010	.3380	.3570	.3750	.3940	.4050	.4310
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11

60.000	.1443	.1257	.0950
70.000	.1075	.1228	.0821
80.000	.0935	.1092	.0976
90.000			.1072
100.000			
110.000			
120.000			
130.000			
140.000			
150.000			

50.000

50.0000
- .5016
- .1596

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0403

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER (RECO01)

MACH (1) = 1.750 ALPHA (2) = 16.070

SECTION (1) PURCHASE DEPENDENT VARIABLE CP

M/L	.0670	.1200	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
90.000	.1310	.1310	.0892											
100.000	.0976	.1124	.0863											
110.000	.0836	.0768	.0770											
120.000		.0808	.0399	.0859	.0749	.0853	.0000	.0862	.0878	.0868	.0856	.0879	.1022	.0853
130.000				.0868	.0743	.0868	.0868	.0863	.0894	.0743	.0766	.0820	.0909	.0979
140.000				.0859	.0760	.0859	.0859	.0810	.0964	.1117	.1106	.1238	.0953	.1366
150.000				.0798									.1007	
160.000				.1906									.2801	
170.000				.3081									.2371	
180.000				.3070									.1771	
190.000				.2878									.1506	
200.000				.2864									.1391	
210.000				.2838	.2363	.2027	.1890	.1796	.1688	.1590	.1472	.1376	.1103	

M/L	.4900	.4600	.4000	.3030	.2240	.1460	.0610	.5900	.6170	.6360	.6540	.6730	.6900	.7120
PHI														
90.000	.0849	.0912	.0947	.0996	.1045	.1106	.1237	.0700	.1313	.1366	.1291	.1319	.1383	.1508
100.000	.1030	.1123	.1180	.1196	.1196	.1327	.1392	.1427	.1369	.1512	.1336	.1359	.1327	.1315
110.000	.1426	.1468	.1474	.1500	.1561	.1667	.1711	.1743	.1734	.1726	.1690	.1555	.1409	.1336
120.000						.2256							.1353	
130.000						.2583							.1348	
140.000						.2554							.1766	
150.000						.1295							.1176	
160.000						.0892							.1146	
170.000						.0722							.0841	
180.000	.0873	.0886	.0736	.0899	.0867	.0878	.0681	.0893	.0867	.0878	.0857	.0713	.0745	.0837

M/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
90.000							.2894							
100.000							.3416	.3249	.0700					
110.000							.3046	.3179	.2990					
120.000	.1701	.1014	.2322	.2755	.2726	.0700	.2481	.2673	.2760					
130.000	.1826	.2001	.2342	.2214	.1976	.1717								
140.000	.1722	.1937	.1725	.0744	.0572	.1259								
150.000						.0822								
160.000						.0729								
170.000						.0473								
180.000						.2091								
190.000						.3047								
200.000						.2563								
210.000	.1840	.1765	.1646	.0799	.2279	.5860								

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (2) = 2.000 ALPHA (1) = 0.785

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.7870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
90.000	.1398	.1308	.0833											
70.000	.1610	.1332	.0978											
60.000	.1614	.1392	.1116											
90.000			.1360	.0566	-.0165	-.0581	-.0541	.0000	-.0455	-.0344	-.0320	-.0549	-.0349	-.0662
100.000						-.0579	-.0575	-.0590	-.0603	-.0632	-.0673	-.0787	-.0775	-.0815
110.000						-.0754	-.0771	-.0802	-.0836	-.0977	-.1017	-.1025	-.1050	-.1034
120.000						-.0512								.9117
130.000						-.1334								-.1269
140.000						-.1975								-.1218
150.000						-.1978								-.1169
160.000						-.1831								-.1175
170.000						-.1846								-.1185
180.000						-.1846	-.1685	-.1489	-.1280	-.1185	-.1164	-.1153	-.1157	-.1080
X/L	.4900	.4680	.4680	.5090	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880
PHI														
90.000	-.0856	-.0867	-.0713	-.0716	-.0719	-.0780	-.0819	.0000	-.0863	-.0841	-.0741	-.0866	-.0853	-.0714
100.000	-.0884	-.0889	-.0866	-.0823	-.0823	-.0856	-.0876	-.0894	-.0841	-.0821	-.0816	-.0775	-.0876	-.0814
110.000	-.1040	-.1038	-.0991	-.0965	-.0966	-.0997	-.0918	-.0912	-.0915	-.0921	-.0868	-.0828	-.0717	-.0769
120.000						-.0945								-.0692
130.000						-.0801								-.0636
140.000						-.0751								-.0494
150.000						-.0664								-.0444
160.000						-.0627								-.0404
170.000						-.0616								-.0385
180.000	-.1082	-.0954	-.0808	-.0713	-.0630	-.0612	-.0519	-.0479	-.0445	-.0423	-.0236	-.0339	-.0317	-.0390
X/L	.7280	.7470	.7670	.7890	.8030	.8290	.8420	.9200	.9400					
PHI														
90.000														
70.000														
60.000														
90.000	-.0914	-.0846	-.1213	-.1268	-.1105	.0000								
100.000	-.0951	-.0945	-.1216	-.0948	-.0310	-.0214								
110.000	-.0808	-.0923	-.0785	.0090	.0428	.0124								
120.000						.2029								
130.000						.2493								
140.000						.1506								
150.000						.1962								
160.000						.2433								
170.000						.2256								
180.000	-.0754	-.0787	-.0895	.0931	.2198	.3766								

TABLEATED SOURCE DATA - 1429/0463

DATE 24 MAR 74

REF: 66-110 PROCESSING UNIT - SHUTTLE ORBITER (RECORD)

$$\text{MACM} (2) = 2.019 \quad \text{ALPHA} (2) = 0.023$$
[illegible][illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (2) = 2.018 ALPHA (3) = 10.950

SECTION (1) *USELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .28 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PHI

60.000 .1527 .1239 .0792
 70.000 .1321 .1206 .0635
 80.000 .1175 .1123 .0690
 90.000 .1087 .0907 .0352
 100.000 .0667 .0649 .0000
 110.000 .0661 .0612 .0576
 120.000 .0618 .0667 .0709
 130.000 .0524 .0526 .0682
 140.000 .1431 .1431
 150.000 .2210 .2210
 160.000 .2177 .2177
 170.000 .2077 .2077
 180.000 .2083 .2083

X/L

.4300 .4680 .4660 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 .0891 .0739 .0754 .0773 .0776 .0863 .0887 .0000
 100.000 .0863 .0933 .0942 .0939 .0945 .0993 .1024 .1092
 110.000 .1152 .1216 .1223 .1234 .1234 .1265 .1269 .1309
 120.000 .1769 .1769 .1769 .1769 .1769 .1769 .1769 .1769
 130.000 .1437 .1437 .1437 .1437 .1437 .1437 .1437 .1437
 140.000 .0948 .0948 .0948 .0948 .0948 .0948 .0948 .0948
 150.000 .0770 .0770 .0770 .0770 .0770 .0770 .0770 .0770
 160.000 .0688 .0688 .0688 .0688 .0688 .0688 .0688 .0688
 170.000 .0602 .0602 .0602 .0602 .0602 .0602 .0602 .0602
 180.000 .0593 .0593 .0593 .0593 .0593 .0593 .0593 .0593

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 .2032 .2032 .2032 .2032 .2032 .2032 .2032 .2032
 70.000 .1687 .1687 .1687 .1687 .1687 .1687 .1687 .1687
 80.000 .1288 .1288 .1288 .1288 .1288 .1288 .1288 .1288
 90.000 .1011 .1011 .1011 .1011 .1011 .1011 .1011 .1011
 100.000 .0697 .0697 .0697 .0697 .0697 .0697 .0697 .0697
 110.000 .0592 .0592 .0592 .0592 .0592 .0592 .0592 .0592
 120.000 .1514 .1514 .1514 .1514 .1514 .1514 .1514 .1514
 130.000 .1612 .1612 .1612 .1612 .1612 .1612 .1612 .1612
 140.000 .0410 .0410 .0410 .0410 .0410 .0410 .0410 .0410
 150.000 .1954 .1954 .1954 .1954 .1954 .1954 .1954 .1954
 160.000 .2570 .2570 .2570 .2570 .2570 .2570 .2570 .2570
 170.000 .2197 .2197 .2197 .2197 .2197 .2197 .2197 .2197
 180.000 .0453 .0453 .0453 .0453 .0453 .0453 .0453 .0453

$$\text{MACH} (2) = 2.020 \quad \text{ALPHA} (4) = 13.910$$

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC-031)

SECTION (1) : USAGE

K/L	.0870	.1260	.1640	.2030	.2420	.2810	.3200	.3590	.3980	.4370	.4760	.5150	.5540	.5930	.6320	.6710	.7100	.7490	.7880	.8270	.8660	.9050	.9440	.9830	.0220	.0610	.1000	.1390	.1780	.2170	.2560	.2950	.3340	.3730	.4120	.4510
PMI																																				
60.000	.1410	.1171	.0775																																	
70.000	.1117	.1087	.0772																																	
80.000	.0887	.0938	.0776																																	
90.000			.0864	.0415	-.0465	-.0685	-.0614	.0000	-.0535	-.0923	-.0926	-.0532	-.0565	-.0913	-.0634																					
100.000						-.0668	-.0635	-.0569	-.0544	-.0547	-.0571	-.0620	-.0679	-.0724	-.0769																					
110.000						-.0580	-.0601	-.0647	-.0656	-.0795	-.0840	-.0907	-.0955	-.0203	-.1057																					
120.000						-.0534								.1787																						
130.000						-.1398								-.2001																						
140.000						-.2244								-.1746																						
150.000						-.2235								-.1409																						
160.000						-.2115								-.1316																						
170.000						-.2112								-.1331																						
180.000						-.2099	-.1995	-.1771	-.1593	-.1490	-.1416	-.1370	-.1322	-.1319	-.1118																					
K/L	.4300	.4680	.4880	.5050	.5240	.5460	.5610	.5860	.5980	.6170	.6360	.6540	.6730	.6880	.7100																					
PMI																																				
90.000	-.0843	-.0883	-.0707	-.0743	-.0764	-.0870	-.0923	.0000	-.0996	-.1006	-.0988	-.0961	-.0945	-.0939	.0000																					
100.000	-.0778	-.0846	-.0875	-.0900	-.0921	-.0999	-.1039	-.1091	-.1060	-.1161	-.1116	-.1132	-.1061	-.0934	-.1110																					
110.000	-.1119	-.1128	-.1155	-.1161	-.1185	-.1252	-.1271	-.1304	-.1326	-.1356	-.1357	-.1364	-.1275	-.1211	-.1216																					
120.000						-.1901								-.1269																						
130.000						-.2122								-.1385																						
140.000						-.1265								-.1486																						
150.000						-.0951								-.0918																						
160.000						-.0813								-.0695																						
170.000						-.0707								-.0582																						
180.000	-.1017	-.0909	-.0770	-.0704	-.0674	-.0676	-.0658	-.0624	-.0585	-.0560	-.0515	-.0537	-.0518	-.0527	-.0621																					
K/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400																											
PMI																																				
60.000							-.2280																													
70.000							-.2080	-.2116	.0000																											
80.000							-.1649	-.1782	-.1922																											
90.000	-.1085	-.0716	-.1632	-.1763	-.1799	.0000																														
100.000	-.1259	-.1317	-.1623	-.1575	-.1192	-.0847																														
110.000	-.1210	-.1380	-.1398	-.0691	-.0167	-.0392																														
120.000						.1258																														
130.000						.1077																														
140.000						-.0073																														
150.000						.1721																														
160.000						.2604																														
170.000						.2232																														
180.000	-.1192	-.1353	-.0373	-.0543	-.1651	.4884																														

MACH (2) = 2.519 ALPHA (5) = 15.029

JAMES 06-030 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

[illegible]

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (2) : 2.017 ALPHA (6) = 17.010

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0670 .1260 .1640 .2030 .2420 .2840 .3010 .3190 .3360 .3570 .3750 .3940 .4050 .4310

PMI

60.000 .1268 .1107 .0744
 70.000 .0776 .0690 .0663
 80.000 .0436 .0579 .0559
 90.000 .0460 .0126 -.0229 -.0625 -.0761 .0000 -.0690 -.0675 -.0666 -.0663 -.0675 -.0963 -.0761
 100.000
 110.000 -.0831 -.0726 -.0684 -.0684 -.0687 -.0702 -.0714 -.0756 -.0627 -.0680 -.0903 -.0939 -.1010
 120.000 -.0702 -.0702 -.0685
 130.000 -.1469
 140.000 -.2353
 150.000 -.2419
 160.000 -.2296
 170.000 -.2270
 180.000 -.2258 -.2076 -.1841 -.1654 -.1562 -.1460 -.1410 -.1339 -.1280 -.1114

X/L

PMI

90.000 -.0726 -.0749 -.0764 -.0617 -.0632 -.0912 -.0962 .0000 -.1049 -.1109 -.1105 -.1147 -.1204 -.1246 .0000
 100.000 -.0791 -.0867 -.0900 -.0876 -.0929 -.1036 -.1058 -.1100 -.1079 -.1151 -.1102 -.1120 -.1108 -.1084 -.1205
 110.000 -.1057 -.1063 -.1110 -.1122 -.1156 -.1255 -.1292 -.1326 -.1325 -.1352 -.1336 -.1327 -.1252 -.1246 -.1260
 120.000
 130.000 -.2222
 140.000 -.2345
 150.000 -.1506
 160.000 -.1182
 170.000 -.0835
 180.000 -.1036 -.0941 -.0808 -.0756 -.0740 -.0763 -.0778 -.0793 -.0805 -.0805 -.0786 -.0825 -.0828 -.0864 -.0945

X/L

PMI

60.000
 70.000
 80.000
 90.000 -.1346 -.1005 -.1196 -.2164 -.2121 .0000
 100.000 -.1543 -.1612 -.1968 -.1651 -.1561 -.1404
 110.000 -.1566 -.1573 -.1430 -.1071 -.0630 -.0621
 120.000
 130.000 .0959
 140.000 .0644
 150.000
 160.000
 170.000
 180.000 -.1301 -.1498 -.0948 -.0972 -.0436 .4577

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (REC002)

MACH (1) = .800 ALPHA (2) = 0.256

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

60.000 .1932
 70.000 .1437 .1599 .0000
 80.000 .1068 .0954 .0560
 90.000 -.1789 -.0566 -.0903 -.0062 .0145 .0000
 100.000 -.1307 -.0550 -.0100 .0366 .0265 .0366
 110.000 -.0838 .0021 .0371 .0885 .0624 .0042
 120.000 -.0130
 130.000 -.0101
 140.000 -.1007
 150.000 .0058
 160.000 .1237
 170.000 .1396
 180.000 -.0634 .0640 .1127 .1498 .2021 .1659

MACH (1) = .600 ALPHA (3) = 10.340

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0670 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PMI

60.000 -.0068 -.0311 -.1266
 70.000 -.0068 -.0181 -.1231
 80.000 -.0193 -.0114 -.1266
 90.000 -.1307 -.2933 -.3753 -.2450 -.1919 .0000 -.1699 -.2252 -.1684 -.1823 -.1285 -.1114 -.1572
 100.000 -.2444 -.2376 -.2153 -.1826 -.1630 -.1544 -.1728 -.1566 -.1970 -.1616
 110.000 -.2901 -.2738 -.2201 -.1995 -.1807 -.1648 -.1695 -.3571 -.1601
 120.000 -.2980
 130.000 -.4593
 140.000 -.3986
 150.000 -.3040
 160.000 -.2412
 170.000 -.2510
 180.000 -.2393 -.1852 -.1630 -.1376 -.1287 -.1094 -.0896 -.0536 -.0644 -.0574

X/L .4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PMI

90.000 -.1256 -.1343 -.1488 -.1368 -.1351 -.1706 -.1770 .0000 -.2401 -.2834 -.2990 -.3073 -.3375 -.3089 .0000
 100.000 -.1594 -.1842 -.1741 -.1548 -.1614 -.1753 -.1911 -.2270 -.1962 -.2892 -.2512 -.2874 -.2926 -.2419 -.2232
 110.000 -.1756 -.1674 -.1728 -.1943 -.1693 -.2028 -.1969 -.2145 -.2004 -.2722 -.2390 -.2556 -.2242 -.2156 -.1365
 120.000 -.1441
 130.000 -.1398
 140.000 -.1465
 150.000 -.0779

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OA63

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AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

(RECD02)

MACH (1) = .800 ALPHA (3) = 10.340

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

160.000
170.000
180.000
X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400
PHI
60.000
70.000
80.000
90.000
100.000
110.000
120.000
130.000
140.000
150.000
160.000
170.000
180.000
MACH (1) = .801 ALPHA (4) = 12.430

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000
70.000
80.000
90.000
100.000
110.000
120.000
130.000
140.000
150.000
160.000
170.000
180.000
X/L .4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100
PHI
60.000
70.000
80.000
90.000
100.000
110.000
120.000
130.000
140.000
150.000
160.000
170.000
180.000

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0463

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AMES 86-830 PRESSURE VENTING - SHUTTLE ORBITER (REC002)

MACH (1) = .832 ALPHA (5) = 14.475

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2810 .3010 .3190 .3380 .3570 .3750 .3940 .4090 .4310

PHI

160.000 -.2632
170.000 -.2607
180.000 -.2430 -1.773 -1.596 -1.1201 -1.163 -1.083 -1.076 -1.0700 -1.0617 -1.0644

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100
PHI
90.000 -.2029 -1.1769 -1.2140 -1.1901 -1.2017 -1.2363 -1.2321 .0000 -1.3035 -1.3858 -1.3632 -1.4133 -1.4302 -1.3996 .0000
100.000 -.2317 -1.2297 -1.2441 -1.2036 -1.2081 -1.2658 -1.2713 -1.2726 -1.2695 -1.3673 -1.3549 -1.3741 -1.3212 -1.2616
110.000 -.2308 -1.2375 -1.2548 -1.2538 -1.2454 -1.2646 -1.2799 -1.2971 -1.2888 -1.2987 -1.2919 -1.3224 -1.2963 -1.2702 -1.2200
120.000 -.2229
130.000 -.2229
140.000 -.2292
150.000 -.1365
160.000 -.1113
170.000 -.1143
180.000 -.0875 -1.0748 -1.0780 -1.0796 -1.0837 -1.0740 -1.0938 -1.1298 -1.1043 -1.0918 -1.1039 -1.0793 -1.0513 -1.0140

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 .0970
70.000 .0307 .1181 .0000
80.000 .0061 .0603 .0599
90.000 -.3554 -1.2263 -1.1769 -1.1300 -1.1110 .0000
100.000 -.2237 -1.1693 -1.1075 -1.0682 -1.0910 -1.0516
110.000 -.1896 -1.0786 -1.0263 -1.0156 -1.0392 -1.1112
120.000 -.0760
130.000 -.1045
140.000 -.2284
150.000 -.0174
160.000 .1433
170.000 .1550
180.000 -.1763 .0261 .0691 .1202 .1919 .1847

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (1) = .601 ALPHA (6) = 18.920

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.3010	.3190	.3360	.3570	.3750	.3940	.4030	.4310
PHI														
60.000	-.0729	-.0640	-.1333											
70.000	-.0614	-.0676	-.1333											
80.000	-.1336	-.1032	-.1435											
90.000		-.1619	-.3087	-.4024	-.3098	-.2306	.0000	-.2404	-.3006	-.3056	-.2863	-.2408	-.1774	-.2814
100.000					-.3133	-.2806	-.3202	-.2679	-.2645	-.2410	-.2892	-.2676	-.3278	-.2540
110.000					-.3494	-.3796	-.4121	-.3417	-.3129	-.3221	-.2937	-.2994	-.3136	-.3000
120.000					-.4036								-.3347	
130.000					-.6108								-.2310	
140.000					-.4296								-.1484	
150.000					-.3529								-.1446	
160.000					-.2493								-.1081	
170.000					-.2762								-.0794	
180.000					-.2396	-.1840	-.1653	-.1371	-.1197	-.1080	-.0614	-.0832	-.0794	-.0557
X/L	.4500	.4660	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.2474	-.2511	-.2429	-.2460	-.2265	-.3043	-.2934	.0000	-.3466	-.4144	-.4097	-.4740	-.5035	.0000
100.000	-.2696	-.2673	-.2346	-.2567	-.2807	-.2807	-.3187	-.3197	-.3705	-.3814	-.3470	-.4254	-.4158	-.3204
110.000	-.2632	-.2766	-.2636	-.3016	-.2990	-.3226	-.3017	-.2965	-.3142	-.3187	-.3341	-.3586	-.3272	-.2733
120.000					-.2266								-.2111	
130.000					-.2637								-.2037	
140.000					-.3206								-.3055	
150.000					-.1917								-.2137	
160.000					-.1273								-.1097	
170.000					-.0947								-.1065	
180.000	-.0801	-.0979	-.0762	-.0935	-.0616	-.0915	-.1184	-.1011	-.1318	-.1145	-.1218	-.1330	-.1187	-.0203
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000														
70.000														
80.000														
90.000	-.4334	-.3497	-.2772	-.2546	-.2250	.0000	-.0665	.0621	.0000					
100.000	-.2775	-.2463	-.1919	-.1586	-.1594	-.1839	-.0995	-.0219	.0305					
110.000	-.2262	-.1384	-.0769	-.0537	-.1107	-.1695	-.1050	-.0442	-.0289					
120.000						-.1250								
130.000						-.1361								
140.000						-.2809								
150.000						-.0420								
160.000						-.1474								
170.000						.1379								
180.000	-.2094	.0061	.0707	.1267	.2009	.1762								

DATE 24 MAR 74

JAMES 68-030 PRESSURE VENTING - SHUTTLE ORBITER

(RECOVER)

$$\text{MACM} (2) = .752 \quad \text{ALPHA} (1) = 0.305$$

SECTION : 11 FUSELAGE

K/L	.0870	.1260	.1640	.2030	.2420	.2840	.3220	.3610	.3990	.4380	.4760	.5150	.5540	.5930	.6320	.6710	.7100	.7490	.7870	.8260	.8650	.9040	.9430	.9820	.0210	.0600	.0990	.1380	.1770	.2160	.2550	.2940	.3330	.3720	.4110	.4500	.4890	.5280	.5670	.6060	.6450	.6840	.7230	.7620	.8010	.8400	.8790	.9180	.9570	.9960	.0350	.0740	.1130	.1520	.1910	.2300	.2690	.3080	.3470	.3860	.4250	.4640	.5030	.5420	.5810	.6200	.6590	.6980	.7370	.7760	.8150	.8540	.8930	.9320	.9710	.0100	.0490	.0880	.1270	.1660	.2050	.2440	.2830	.3220	.3610	.4000	.4390	.4780	.5170	.5560	.5950	.6340	.6730	.7120	.7510	.7900	.8290	.8680	.9070	.9460	.9850	.0240	.0630	.1020	.1410	.1800	.2190	.2580	.2970	.3360	.3750	.4140	.4530	.4920	.5310	.5700	.6090	.6480	.6870	.7260	.7650	.8040	.8430	.8820	.9210	.9600	.9990	.0380	.0770	.1160	.1550	.1940	.2330	.2720	.3110	.3500	.3890	.4280	.4670	.5060	.5450	.5840	.6230	.6620	.7010	.7400	.7790	.8180	.8570	.8960	.9350	.9740	.0140	.0530	.0920	.1310	.1700	.2090	.2480	.2870	.3260	.3650	.4040	.4430	.4820	.5210	.5600	.5990	.6380	.6770	.7160	.7550	.7940	.8330	.8720	.9110	.9500	.9890	.0280	.0670	.1060	.1450	.1840	.2230	.2620	.3010	.3400	.3790	.4180	.4570	.4960	.5350	.5740	.6130	.6520	.6910	.7300	.7690	.8080	.8470	.8860	.9250	.9640	.0000	.0390	.0780	.1170	.1560	.1950	.2340	.2730	.3120	.3510	.3900	.4290	.4680	.5070	.5460	.5850	.6240	.6630	.7020	.7410	.7800	.8190	.8580	.8970	.9360	.9750	.0180	.0570	.0960	.1350	.1740	.2130	.2520	.2910	.3300	.3690	.4080	.4470	.4860	.5250	.5640	.6030	.6420	.6810	.7200	.7590	.7980	.8370	.8760	.9150	.9540	.9930	.0320	.0710	.1100	.1490	.1880	.2270	.2660	.3050	.3440	.3830	.4220	.4610	.5000	.5390	.5780	.6170	.6560	.6950	.7340	.7730	.8120	.8510	.8900	.9290	.9680	.0040	.0430	.0820	.1210	.1600	.1990	.2380	.2770	.3160	.3550	.3940	.4330	.4720	.5110	.5500	.5890	.6280	.6670	.7060	.7450	.7840	.8230	.8620	.9010	.9400	.9790	.0130	.0520	.0910	.1300	.1690	.2080	.2470	.2860	.3250	.3640	.4030	.4420	.4810	.5200	.5590	.5980	.6370	.6760	.7150	.7540	.7930	.8320	.8710	.9100	.9490	.9880	.0220	.0610	.1000	.1390	.1780	.2170	.2560	.2950	.3340	.3730	.4120	.4510	.4900	.5290	.5680	.6070	.6460	.6850	.7240	.7630	.8020	.8410	.8800	.9190	.9580	.9970	.0360	.0750	.1140	.1530	.1920	.2310	.2700	.3090	.3480	.3870	.4260	.4650	.5040	.5430	.5820	.6210	.6600	.6990	.7380	.7770	.8160	.8550	.8940	.9330	.9720	.0160	.0550	.0940	.1330	.1720	.2110	.2500	.2890	.3280	.3670	.4060	.4450	.4840	.5230	.5620	.6010	.6400	.6790	.7180	.7570	.7960	.8350	.8740	.9130	.9520	.9910	.0300	.0690	.1080	.1470	.1860	.2250	.2640	.3030	.3420	.3810	.4200	.4590	.4980	.5370	.5760	.6150	.6540	.6930	.7320	.7710	.8100	.8490	.8880	.9270	.9660	.0020	.0410	.0800	.1190	.1580	.1970	.2360	.2750	.3140	.3530	.3920	.4310	.4700	.5090	.5480	.5870	.6260	.6650	.7040
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$$\alpha_{\text{Mg}}(2) = .746 \quad \alpha_{\text{Mg}}(2) = 0.411$$

JAMES 06-030 PRESSURE VENTING - SHUTTLE ORBITER

(2003)

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.2620	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
90.000	-.0063	-.0033	-.1447												
70.000	.0259	.0023	-.1080												
60.000	.0025	-.0351	-.1133												
50.000			-.1192	-.3297	-.4333	-.2763	-.1615	.0000	-.1410	-.1672	-.1379	-.1307	-.1241	-.0942	-.1359
100.000						-.2701	-.2169	-.1999	-.1537	-.1363	-.1150	-.1238	-.1347	-.1591	-.1252
110.000						-.3023	-.2663	-.2420	-.1677	-.1468	-.1259	-.1448	-.1355	-.3353	-.1252
120.000						-.3473								-.4755	
130.000						-.4177								-.0844	
140.000						-.4591								-.0961	
150.000						-.4426								-.1014	
160.000						-.4705								-.0717	
170.000						-.4614								-.0744	
180.000						-.4434	-.2406	-.1347	.0791	-.0663	-.0418	-.0638	-.0303	-.1654	-.0395
X/L	.4500	.4880	.4880	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	-.0992	-.0661	-.0965	-.0812	-.0725	-.1010	-.1297	.0000	-.1918	-.2593	-.2701	-.3226	-.3505	-.3381	.0680
100.000	-.1167	-.1055	-.1127	-.0942	-.0905	-.1310	-.1365	-.1579	-.1769	-.2773	-.2425	-.2951	-.3027	-.2766	-.2414
110.000	-.1024	-.1066	-.1100	-.1160	-.1055	-.1405	-.1644	-.1692	-.1926	-.2157	-.2269	-.2718	-.2314	-.2188	-.1946
120.000						-.0910								-.1382	
130.000						-.1265								-.0954	
140.000						-.1157								-.0995	
150.000						-.1004								-.0890	
160.000						-.0953								-.0763	
170.000						-.0037								-.0570	
180.000	-.0444	-.0447	-.0447	-.0513	-.0574	-.0622	-.0977	-.0829	-.1079	-.0980	-.1083	-.1040	-.1073	-.0570	-.0202
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PMI															
90.000							.2161								
70.000							.1531	.1653	.0000						
60.000							.1171	.1107	.0559						
50.000							.1694	.0652	.0190						
100.000	-.2895	-.1176	-.0710	-.0349	-.0067	.0000									
110.000	-.2096	-.0937	-.0258	.0149	.0007	.0393									
120.000	-.1472	-.0224	.0352	.0283	.0236	-.0250									
130.000						-.0446									
140.000						.0014									
150.000						-.0491									
160.000						.0199									
170.000						.1406									
180.000	-.1360	.0435	.0872	.1306	.2077	.1581									
X/L	.9500	.9600	.9600	.9700	.9800	.9800	.9900	.9900	.9900	.9900	.9900	.9900	.9900	.9900	.9900
PMI															
90.000															
70.000															
60.000															
50.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

$$\text{MACH} (2) = .749 \quad \text{ALPHA} (3) = 10.495$$

AMES 66-650 PRESSURE VENTING - SHUTTLE ORBITER (REC002)

DEPENDENT VARIABLE CP

K/L	.0070	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4090	.4310
PMI															
60,000	-.0004	-.0010	-.1101												
70,000	.0164	.0091	-.1035												
80,000	.0033	.0051	-.0945												
90,000			-.1111	-.3249	-.4583	-.2780	-.2014	.0000	-.1582	-.2173	-.1600	-.1775	-.1363	-.0950	-.1700
100,000						-.3042	-.2626	-.2241	-.1812	-.1600	-.1507	-.1817	-.1495	-.1553	-.1405
110,000						-.3336	-.2999	-.2787	-.2387	-.1884	-.1802	-.1685	-.1505	-.2833	-.1558
120,000						-.3567								-.3600	
130,000						-.3359								-.1221	
140,000						-.5137								-.0979	
150,000						-.5584								-.0879	
160,000						-.5905								-.0881	
170,000						-.5727								-.0734	
180,000						-.5619	-.1280	-.1950	-.1147	-.0911	-.0822	-.0446	-.0415	-.0349	-.0470
K/L	.4500	.4600	.4660	.5050	.5240	.5460	.5610	.5800	.5900	.670	.6360	.6540	.6730	.6880	.7100
PMI															
90,000	-.1145	-.1371	-.1069	-.1251	-.1051	-.1251	-.1615	.0000	-.2316	-.3001	-.3265	-.3947	-.4193	-.4024	.0000
100,000	-.1379	-.1449	-.1578	-.1391	-.1375	-.1810	-.1915	-.1971	-.1963	-.3110	-.2981	-.3591	-.3725	-.3155	-.2785
110,000	-.1404	-.1523	-.1494	-.1683	-.1618	-.1926	-.1856	-.1952	-.2797	-.2487	-.2863	-.3006	-.2863	-.2713	-.2000
120,000						-.1457								-.1921	
130,000						-.1492								-.1699	
140,000						-.1425								-.1721	
150,000						-.1070								-.1418	
160,000						-.0984								-.1065	
170,000						-.0850								-.0894	
180,000	-.0845	-.0853	-.0877	-.0893	-.0814	-.0757	-.0963	-.1163	-.1179	-.1211	-.1001	-.1009	-.0907	-.0800	.0313
K/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PMI															
60,000							.1421								
70,000							.0995	.1403	.0000						
80,000							.0443	.0562	.0321						
90,000	-.3187	-.1121	-.1223	-.0961	-.0550	.0700	.0114	.0289	-.0027						
100,000	-.2481	-.1169	-.0891	-.0393	-.0388	-.0202									
110,000	-.1606	-.0630	-.0098	-.0023	-.0033	-.0802									
120,000						-.0788									
130,000						-.0437									
140,000						-.0929									
150,000						-.0846									
160,000						-.1291									
170,000						-.1477									
180,000	-.1614	.0364	.0654	.1429	.1880	.1680									

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

(REC002)

MACH (2) = .750 ALPHA (6) = 16.740

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 -.0756 -.0431 -.1226

70.000 -.0835 -.0251 -.1062

80.000 -.1060 -.0690 -.1234

90.000 -.1210 -.2064 -.4891

100.000 -.3609 -.2705 .0000

110.000 -.366 -.2837 -.3072

120.000 -.3958 -.4084 -.4594

130.000 -.4724 -.3609 -.3070

140.000 -.6339 -.2837 -.2755

150.000 -.6062 -.4084 -.3218

160.000 -.6062 -.4724 -.3115

170.000 -.6727 -.3609 -.3202

180.000 -.6601 -.2837 -.2661

190.000 -.6751 -.4891 -.2508

X/L .4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.2201 -.2354 -.2097

100.000 -.2315 -.2473 -.2044

110.000 -.2575 -.2467 -.2344

120.000 -.2386 -.2391 -.2386

130.000 -.2490 -.2507 -.2507

140.000 -.3106 -.2659 -.2659

150.000 -.1937 -.2506 -.2506

160.000 -.1524 -.2765 -.2914

170.000 -.0953 -.2586 -.2914

180.000 -.0583 -.0993 -.1030

190.000 -.1030 -.1083 -.1088

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 -.0779 -.1629 -.0309

70.000 -.0835 -.1374 -.0102

80.000 -.1060 -.2043 -.1977

90.000 -.5197 -.4226 -.4074

100.000 -.3859 -.3031 -.2551

110.000 -.2694 -.1694 -.1298

120.000 -.2444 -.2258 -.2258

130.000 -.2444 -.2444 -.2444

140.000 -.1780 -.1780 -.1780

150.000 -.2261 -.2261 -.2261

160.000 -.1119 -.1119 -.1119

170.000 .1213 .1213 .1213

180.000 .0980 .0980 .0980

190.000 -.2450 -.0210 -.0101

X/L .0822 .1940 .2004

AMES 66-63D PRESSURE VENTING - SHUTTLE ORBITER

(RECO02)

MACH (3) = .849 ALPHA (1) = 6.435

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0670	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI															
60.000	.0340	.0216	-.0912												
70.000	.0726	.0409	-.0924												
80.000	.0746	.0201	-.0824												
90.000		-.0919	-.3276	-.6799	-.3208	-.2033	-.0000	-.1545	-.1802	-.1470	-.1245	-.0668	-.0645	-.0977	
100.000				-.2976	-.2302	-.2243	-.1906	-.1440	-.1250	-.1270	-.1014	-.1334	-.0931		
110.000				-.3549	-.2602	-.2936	-.2150	-.1672	-.1365	-.1145	-.0966	-.4715	-.0639		
120.000				-.3798									-.5933		
130.000				-.4364									-.0666		
140.000				-.5413									-.0703		
150.000				-.6323									-.0596		
160.000				-.6596									-.0315		
170.000				-.6606									-.0274		
180.000				-.6611	-.6014	-.4973	-.3836	-.2455	-.1494	-.0735	-.0240		-.0201	-.0087	

X/L	.4500	.4660	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	-.0676	-.0542	-.0600	-.0370	-.0268	-.0513	-.0591	.0000	-.1119	-.1671	-.2096	-.271	.3550	-.3797	.0000
100.000	-.0822	-.0640	-.0661	-.0576	-.0452	-.0673	-.0894	-.1017	-.1017	-.1959	-.1908	-.2695	-.3203	-.3050	-.3066
110.000	-.0763	-.0576	-.0556	-.0629	-.0644	-.0804	-.0939	-.1010	-.1133	-.1483	-.1832	-.2470	-.2645	-.2697	-.2436
120.000					-.0641								-.1662		
130.000					-.0665								-.1373		
140.000					-.0727								-.1142		
150.000					-.0490								-.1114		
160.000					-.0497								-.0828		
170.000					-.0416								-.0823		
180.000	.0014	-.0022	-.0076	-.0110	-.0178	-.0317	-.0510	-.0648	-.0897	-.0995	-.0836	-.0893	-.0863	-.0752	-.0318

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PMI									
60.000							.1911		
70.000							.1405	.1747	.0000
80.000							.0868	.1015	.0424
90.000	-.3946	-.0289	-.1073	-.0546	-.0340	.0000	.0504	.0619	.0067
100.000	-.3764	-.2151	-.0715	-.0266	-.0362	-.0247			
110.000	-.3022	-.1411	-.0021	.0147	-.0380	-.0836			
120.000						-.1105			
130.000						-.0355			
140.000						-.0490			
150.000						-.0338			
160.000						.1325			
170.000						.1422			
180.000	-.2137	-.0681	.0611	.1246	.1659	.1862			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC002)

MACH (3) = .052 ALPHA (2) = 0.548

SECTION (1) FUSELAGE	DEPENDENT VARIABLE CP
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

	X/L	.0870	.1280	.1640	.2030	.2420	.2840	.2820	.3010	.3190	.3380	.3370	.3730	.3940	.4030	.4310
PMI																
60.000		.0384	.0331	-.0773												
70.000		.0615	.0464	-.0593												
80.000		.0596	.0126	-.0632												
90.000				-.0613	-.3125	-.6348	-.4277	-.2207	.0000	-.2052	-.2375	-.1877	-.1636	-.1189	-.0896	-.1285
100.000							-.4051	-.2547	-.2501	-.2112	-.1928	-.1658	-.1668	-.1292	-.1621	-.1065
110.000							-.3927	-.2734	-.3188	-.2681	-.2163	-.2001	-.1500	-.1382	-.3216	-.1077
120.000							-.4625								-.4453	
130.000							-.4724								-.0942	
140.000							-.5543								-.0775	
150.000							-.6163								-.0814	
160.000							-.6518								-.0505	
170.000							-.6406								-.0334	
180.000							-.6746	-.6234	-.5365	-.4325	-.3047	-.2158	-.1230	-.0626	-.0275	.0003
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100	
PMI																
90.000		-.0804	-.0821	-.0746	-.0652	-.0601	-.0898	-.0725	.0000	-.1395	-.2030	-.2480	-.3344	-.4225	-.4571	.0000
100.000		-.1070	-.1093	-.1021	-.0838	-.0712	-.1050	-.1000	-.1145	-.1243	-.2271	-.2382	-.3275	-.3810	-.4002	-.3962
110.000		-.1028	-.0917	-.0963	-.0956	-.0997	-.1157	-.1125	-.1345	-.1409	-.1863	-.2429	-.2986	-.3268	-.3484	-.3198
120.000							-.0871								-.2252	
130.000							-.0970								-.1970	
140.000							-.0909								-.1859	
150.000							-.0644								-.1690	
160.000							-.0568								-.1356	
170.000							-.0406								-.1172	
180.000	-.0043	-.0122	-.0650	-.0296	-.0386	-.0472	-.0351	-.0351	-.0769	-.0902	-.1093	-.1094	-.1231	-.1221	-.1055	-.0377
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400							
PMI																
60.000							.1710									
70.000							.0959	.1496	.0000							
80.000							.0618	.0703	.0246							
90.000	-.5089	-.2651	-.1814	-.1084	-.0911	.0000	.0093	.0319	-.0114							
100.000	-.4108	-.2461	-.1236	-.0655	-.0786	-.0786										
110.000	-.2915	-.1331	-.0599	-.0384	-.0866	-.1384										
120.000						-.1354										
130.000						-.0632										
140.000						-.0856										
150.000						.0006										
160.000						.1129										
170.000						.1182										
180.000	-.2959	.0231	.0700	.1116	.1720	.1766										

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AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

(REC002)

MACH (3) = .851 ALPHA (3) = 10.620

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2820 .3010 .3190 .3360 .3570 .3750 .3940 .4050 .4310

PHI

60.000	.0190	.0380	-.0632										
70.000	.0355	.0478	-.0593										
80.000	.0358	.0478	-.0540										
90.000		-.0460	-.3042	-.5991	-.4414	-.2368	.0000	-.2356	-.2726	-.2409	-.2015	-.1444	-.1069
100.000					-.4161	-.2628	-.2760	-.2750	-.2275	-.2081	-.2061	-.1640	-.2082
110.000					-.3942	-.2867	-.3502	-.3198	-.2611	-.2178	-.2054	-.1660	-.2739
120.000					-.4103								-.3637
130.000					-.4894								-.1193
140.000					-.5556								-.1033
150.000					-.6237								-.0984
160.000					-.6653								-.0684
170.000					-.6744								-.0459
180.000					-.6639	-.6305	-.5762	-.4528	-.3472	-.2404	-.1449	-.0730	-.0420

X/L

.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880
.7100													

PHI

90.000	-.1205	-.1090	-.0988	-.0833	-.0828	-.1044	-.0956	.0000	-.1652	-.2379	-.2880	-.3849	-.4813
100.000	-.1379	-.1419	-.1400	-.1365	-.0981	-.1264	-.1347	-.1433	-.1568	-.2674	-.2740	-.3712	-.4395
110.000	-.1467	-.1310	-.1332	-.1324	-.1305	-.1528	-.1433	-.1627	-.1871	-.2279	-.2799	-.3434	-.3648
120.000						-.1075							-.2652
130.000						-.1266							-.2381
140.000						-.1192							-.2418
150.000						-.0792							-.1934
160.000						-.0630							-.1553
170.000						-.0519							-.1378
180.000	-.0083	-.0184	-.0150	-.0315	-.0494	-.0548	-.0711	-.0922	-.1151	-.1261	-.1390	-.1594	-.1415

X/L

.7290	.7370	.7670	.7850	.8030	.8290	.8620	.9000	.9400					

PHI

60.000						.0740							
70.000						.0129	.0956	.0000					
80.000						-.0323	.0175	.0112					
90.000	-.5773	-.3157	-.1910	-.1582	-.1594	.0000	-.0676	-.0116	-.0370				
100.000	-.4614	-.2467	-.1311	-.1061	-.1418	-.1632							
110.000	-.3220	-.1539	-.0641	-.0528	-.1167	-.2201							
120.000					-.1815								
130.000					-.0861								
140.000					-.1314								
150.000					-.0248								
160.000					.0956								
170.000					.1163								
180.000	-.3144	-.0044	.0467	.3093	.1560	.1787							

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECON2)

MACH (3) = .849 ALPHA (4) = 12.710

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .0130 .0264 -.0693
 70.000 .0152 .0345 -.0533
 80.000 -.0007 .0311 -.0437
 90.000 -.0419 -.2672 -.5812 -.4602 -.2436 .0000 -.2538 -.3165 -.2429 -.2163 -.1857 -.1497 -.11939
 100.000 -.4378 -.2570 -.2907 -.2809 -.2360 -.2475 -.2046 -.2357 -.1825
 110.000 -.4275 -.2977 -.3626 -.3821 -.3070 -.2753 -.2488 -.2281 -.2675 -.1954
 120.000 -.4048
 130.000 -.4729
 140.000 -.5700
 150.000 -.6342
 160.000 -.6591
 170.000 -.6700
 180.000 -.6745 -.5965 -.4675 -.3914 -.2646 -.1752 -.0873 -.0689 -.0128
 190.000

X/L

.4500 .4660 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.1473 -.1331 -.1266 -.1116 -.1066 -.1292 -.1338 .0000 -.1925 -.2721 -.3385 -.4023 -.5038 -.5211 .0000
 100.000 -.1740 -.1727 -.1714 -.1283 -.1253 -.1571 -.1494 -.1814 -.3034 -.3015 -.3814 -.4506 -.4543
 110.000 -.1991 -.1688 -.1729 -.1581 -.1586 -.1773 -.1683 -.1925 -.2055 -.2570 -.3052 -.3597 -.3819 -.3439
 120.000 -.1275
 130.000 -.1649
 140.000 -.1599
 150.000 -.1003
 160.000 -.0890
 170.000 -.0702
 180.000 -.0055 -.0162 -.0229 -.0475 -.0263 -.0670 -.0897 -.1082 -.1208 -.1447 -.1463 -.1591 -.1488 -.1357 -.0880
 190.000

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000
 70.000
 80.000
 90.000 -.4765 -.2003 -.2633 -.2740 -.3089 .0000
 100.000 -.3917 -.1946 -.1819 -.1669 -.2373 -.3401
 110.000 -.2304 -.1260 -.0696 -.0819 -.1590 -.3470
 120.000 -.2259
 130.000 -.1485
 140.000 -.1990
 150.000 -.0720
 160.000 .0796
 170.000 .0869
 180.000 -.2699 -.0341 .0244 .0655 .1406 .1599

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(REC002)

JAMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACH} (3) = .050 \quad \text{ALPHA} (5) = 14.845$$

SECTION / AGE

[illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECD02)

KACH (3) = .652 ALPHA (6) = 16.900

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000	-.0285	.0084	-.0699										
70.000	-.0366	.0021	-.0607										
80.000	-.0769	-.0059	-.0566										
90.000		-.0456	-.2317	-.5322	-.4434	-.2907	.0000	-.2825	-.3267	-.3569	-.3314	-.2587	-.2067
100.000					-.4507	-.2516	-.3190	-.3285	-.3769	-.3168	-.3243	-.2907	-.3524
110.000					-.4684	-.3289	-.4194	-.4289	-.4669	-.3452	-.3187	-.3422	-.3274
120.000					-.5366								-.3124
130.000					-.5028								-.2270
140.000					-.5984								-.1764
150.000					-.6390								-.1651
160.000					-.6660								-.1348
170.000					-.6614								-.0833
180.000					-.6721	-.6447	-.6068	-.4664	-.3691	-.2703	-.1638	-.1254	-.1336
													-.0591

X/L

.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880
													.7100

PHI

90.000	-.2168	-.1899	-.1758	-.1603	-.1574	-.1860	-.1885	.0000	-.2622	-.3568	-.3964	-.5144	-.5950
100.000	-.2496	-.2269	-.2170	-.1790	-.1845	-.2102	-.2086	-.2231	-.2305	-.3708	-.3484	-.4492	-.4783
110.000	-.2264	-.2204	-.2105	-.2134	-.2170	-.2448	-.2709	-.2305	-.2329	-.2856	-.3317	-.3858	-.4114
120.000						-.1918							-.3116
130.000						-.2101							-.2513
140.000						-.2575							-.3202
150.000						-.1597							-.2577
160.000						-.1167							-.1896
170.000						-.1024							-.2076
180.000	-.0187	-.0363	-.0439	-.0799	-.0869	-.0803	-.1098	-.1290	-.1533	-.1924	-.1776	-.1844	-.1820

X/L

.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
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PHI

60.000													
70.000													
80.000													
90.000	-.7254	-.5160	-.3918	-.3687	-.4561	.0000							
100.000	-.5481	-.3696	-.2478	-.2358	-.3322	-.4305							
110.000	-.3432	-.2160	-.1079	-.1175	-.1801	-.4016							
120.000						-.2073							
130.000						-.1481							
140.000						-.2552							
150.000						-.1160							
160.000						.0933							
170.000						.0609							
180.000	-.3420	-.1133	-.0363	.0304	.1357	.1564							

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(RECORD)

JAMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (4) = .952 ALPHA (1) = 6.528

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

0.070	.1260	.1640	.2030	.2420	.2640	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
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PMI

[illegible]

7.1

PHI

91.000	.0105	.0255	.0302	.0446	.0312	.0373	.0255	.0000	-.0252	-.0768	-.1047	-.1836	-.2572	-.3019	.0000
100.000	.0007	.0077	.0189	.0371	.0435	.0239	-.0032	-.0105	-.0185	-.1004	-.0964	-.1687	-.2360	-.2388	-.3350
110.000	.0093	.0264	.0332	.0790	.0268	.0146	-.0043	-.0180	-.0369	-.0647	-.1056	-.1599	-.1972	-.2363	-.2865
120.000						.0305								-.1484	
130.000						-.0080								-.1270	
140.000						.0025								-.1213	
150.000						.0318								-.1036	
160.000						.0332								-.0781	
170.000						.0384								-.0746	
180.000	.0735	.0599	.0792	.0767	.0692	.0346	.0202	.0037	-.0153	-.0314	-.0323	-.0346	-.0672	-.0677	-.0354

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III

60,000						.1453	
70,000						.0802	.1763
80,000						.0326	.0822
90,000						-.0256	.0655
100,000	-.4133	-.2467	-.3130	-.1990		.0000	
110,000	-.4030	-.3480	-.2066	-.1903	-.1691	-.1729	
120,000	-.2900	-.1768	-.0816	-.0798	-.1466	-.2582	
130,000						-.1992	
140,000						-.0363	
150,000						-.0027	
160,000						.1014	
170,000						.2148	
180,000						.2212	
190,000	-.2750	-.0231	.1109	.1999	.2799	.3027	

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC002)

MACH (4) = .936 ALPHA (2) = 8.651

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2800	.3190	.3580	.3970	.4350	.4730
PHI											
60.000	.0630	.0696	.0701								
70.000	.1185	.1105	.0153								
80.000	.1125	.0953	.0256								
90.000		.0344	-.2550	-.5266	-.5180	-.4466	.0000	-.4017	-.4591	-.3949	-.3838
100.000					-.5166	-.5047	-.4718	-.4464	-.4573	-.4857	-.3528
110.000					-.6065	-.5755	-.5506	-.5351	-.4957	-.3034	-.2549
120.000					-.6412						
130.000					-.8681						
140.000					-1.0200						
150.000					-.9387						
160.000					-.8951						
170.000					-.7118						
180.000					-.6707	-.4864	-.4278	-.4115	-.3597	-.2937	-.1855
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540
PHI											
90.000	.0012	-.0026	-.0006	.0165	.0269	.0106	.0269	.0000	-.0220	-.0936	-.1320
100.000	-.0090	-.0271	-.0273	-.0046	.0169	-.0103	.0012	-.0097	-.0138	-.1165	-.1272
110.000	-.0221	-.0076	-.0067	-.0056	-.0081	-.0221	-.0072	-.0142	-.0372	-.0764	-.1329
120.000					-.0003						
130.000					-.0124						
140.000					-.0124						
150.000					.0470						
160.000					.0550						
170.000					.0654						
180.000	.0576	.0712	.0728	.0707	.0664	.0622	.0432	.0280	-.0072	-.0232	-.0375
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400		
PHI											
60.000							.0426				
70.000							-.0158	.1337	.0000		
80.000							-.0557	.0594	.0612		
90.000	-.4550	-.3444	-.3122	-.2897	-.2605	.0000	-.1084	.0283	.0333		
100.000	-.4253	-.4276	-.2187	-.1834	-.2368	-.2650					
110.000	-.3312	-.2272	-.0883	-.0927	-.1962	-.3503					
120.000					-.2386						
130.000					-.0741						
140.000					-.0776						
150.000					.0508						
160.000					.1646						
170.000					.1709						
180.000	-.3268	.0414	.1107	.1658	.2343	.2659					

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (4) = .931 ALPHA (3) = 10.760

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0670	.1260	.1640	.2030	.2420	.2840	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
PMI														
60.000	.0626	.0662	-.0015											
70.000	.0664	.1007	.0110											
80.000	.0629	.1092	.0233											
90.000		.0336	-.2369	-.5143	-.5068	-.4409	.0000	-.3633	-.4244	-.4181	-.4032	-.3240	-.2240	-.0279
100.000				-.5330	-.4951	-.4566	-.4181	-.4331	-.4425	-.3472	-.2975	-.2149	-.0429	
110.000				-.5932	-.5553	-.5387	-.5140	-.5455	-.5683	-.5469	-.2353	-.3347	-.0490	
120.000				-.6586								-.3673		
130.000				-.9007								-.2312		
140.000				-1.0690								-.1941		
150.000				-.9942								-.0799		
160.000				-.6116								-.0769		
170.000				-.6595								-.0720		
180.000				-.6990	-.5339	-.4931	-.4381	-.3795	-.3159	-.2194	-.1235	-.0933	.0035	

X/L	.4500	.4660	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
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PMI

90.000	-.0177	-.0300	-.0293	-.0116	-.0061	-.0216	-.0118	.0000	-.0657	-.1350	-.1885	-.2507	-.3383	-.3959	.0000
100.000	-.0593	-.0690	-.0531	-.0304	-.0154	-.0366	-.0420	-.0335	-.0592	-.1673	-.1765	-.2406	-.3161	-.3454	-.4364
110.000	-.0501	-.0492	-.0413	-.0492	-.0442	-.0561	-.0509	-.0673	-.0869	-.1320	-.1862	-.2341	-.2765	-.3309	-.3921
120.000						-.0286								-.2443	
130.000						-.0452								-.2219	
140.000						-.0613								-.2396	
150.000						.0107								-.2205	
160.000						.0203								-.1731	
170.000						.0331								-.1613	
180.000	.0446	.0594	.0666	.0569	.0475	.0347	.0117	-.0114	-.0390	-.0604	-.0830	-.1088	-.1297	-.1327	-.1112

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI

60.000							-.0906		
70.000							-.1420	.0471	.0000
80.000							-.1961	-.0175	.0309
90.000	-.5186	-.4964	-.4374	-.3523	-.3536	.0000	-.2289	-.0469	-.0143
100.000	-.5080	-.4774	-.3236	-.2347	-.3035	-.3714			
110.000	-.3636	-.2916	-.1781	-.1564	-.2440	-.4466			
120.000						-.2791			
130.000						-.1023			
140.000						-.1211			
150.000						-.0150			
160.000						.1640			
170.000						.1407			
180.000	-.3666	-.0361	-.0425	.1185	.2019	.2149			

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

$$\text{MACH} (4) = .999 \quad \text{ALPHA} (4) = 12.840$$

SECTION (1) FUSELAGE

DEFENDANT VARIABLE CF

[illegible]

AMES 64-830 PRESSURE VENTING - SHUTTLE ORBITER
(REC002)

$$\text{MACH (4)} = .959 \quad \text{ALPHA (5)} = 14.935$$

SECTION (1) FUSELAGE

X/L	.0070	.1260	.1640	.2030	.2420	.2840	.2820	.5010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
60,000	.0464	.0600	.0100												
70,000	.0339	.0469	.0307												
80,000	.0176	.0323	.0394												
90,000		.0587		-.1628	-.4604	-.4556	-.4001	.0000	-.3142	-.3333	-.3622	-.3544	-.3994	-.3314	-.3945
100,000						-.4738	-.4287	-.3928	-.3315	-.3688	-.3463	-.4087	-.3355	-.4046	-.3592
110,000						-.3160	-.5135	-.4521	-.4333	-.4476	-.4642	-.5334	-.4252	-.3567	-.3597
120,000						-.5913								-.3497	
130,000						-.8734								-.2768	
140,000						-.6314								-.2637	
150,000						-.6228								-.2533	
160,000						-.6269								-.2544	
170,000						-.8347								-.2594	
180,000						-.7512	-.6028	-.6300	-.8091	-.5519	-.4762	-.2047	-.2996	-.2552	-.1353

.7120
.6840
.6540
.6360
.6170
.5980
.5800
.5610
.5460
.5240
.5050
.4860
.4690
.4500

PMI	-0.2110	-0.0264	-0.0426	-0.0797	-0.0663	-0.0763	-0.0492	0.0000	-0.1114	-0.1763	-0.2626	-0.3411	-0.4366	-0.4802	0.0000
90.0000	-0.0312	-0.0394	-0.0939	-0.1025	-0.0690	-0.0930	-0.0795	-0.0974	-0.0671	-0.1935	-0.2224	-0.2964	-0.3757	-0.4063	-0.4865
100.0000	-0.0494	-0.0503	-0.1219	-0.1371	-0.1036	-0.1190	-0.0912	-0.0944	-0.1139	-0.1467	-0.2247	-0.2609	-0.3168	-0.3663	-0.4194
110.0000						-0.0649								-0.2623	
120.0000						-0.0591								-0.2661	
130.0000						-0.1163								-0.2947	
140.0000						-0.0669								-0.2455	
150.0000						-0.0127								-0.2284	
160.0000						0.0311								-0.2004	
170.0000	0.0422	-0.0468	-0.0152	-0.0273	-0.0009	-0.0395	-0.0232	-0.0002	-0.0242	-0.0813	-0.1134	-0.1334	-0.1616	-0.1866	-0.1645

[illegible][illegible]

JAMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC002)

$$\text{MACH} (5) = 1.050 \quad \text{ALPHA} (1) = 0.609$$

SECTION (1) FUSELAGE

[illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (REC002)

MACH (3) = 1.050 ALPHA (2) = 0.685

SECTION (1) FUSELAGE

[illegible]

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/OA63

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECD02)

MACM (5) = 1.033 ALPHA (3) = 10.750

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0670	.1260	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.1790	.2061	.1342											
70.000	.2039	.2247	.1492											
80.000	.1997	.2340	.1606											
90.000		.1697		-.0670	-.3594	-.3489	-.2669	-.2421	-.2976	-.2991	-.3032	-.3139	-.2400	-.3441
100.000						-.3472	-.3367	-.3066	-.2997	-.3251	-.3804	-.3750	-.4294	-.3876
110.000						-.4205	-.3932	-.3614	-.3666	-.3970	-.4196	-.4370	-.4055	-.3202
120.000						-.4680							-.3956	
130.000						-.6689							-.2061	
140.000						-.6616							-.1646	
150.000						-.7999							-.1539	
160.000						-.7406							-.1239	
170.000						-.6186							-.1119	
180.000						-.5406	-.4637	-.4325	-.3666	-.3474	-.2645	-.1764	-.1191	-.0649

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.3560	-.3337	-.2724	-.2199	-.1352	.1271	.1347	.0000	.0211	-.0363	-.1042	-.1666	-.2341	.0000
100.000	-.3267	-.2745	-.2455	-.2075	-.0967	.1110	.1132	.0636	.0616	-.0117	-.0315	-.0996	-.1627	-.1904
110.000	-.2705	-.2304	-.1963	-.2031	-.0445	.0661	.0650	.0679	.0476	.0077	-.0492	-.0936	-.1326	-.1797
120.000						.0536							-.1034	
130.000						.0713							-.0750	
140.000						.0504							-.0953	
150.000						.0677							-.0669	
160.000						.1106							-.0309	
170.000						.1107							-.0217	
180.000	-.0935	-.0460	-.0315	-.0153	.0756	.0951	.1115	.1130	.0966	.0791	.0611	.0356	.0111	-.0207

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000														
70.000														
80.000														
90.000	-.3601	-.3323	-.3616	-.2400	-.2231	.0000								
100.000	-.3446	-.3555	-.2347	-.1144	-.1694	-.2657								
110.000	-.2702	-.2396	-.0686	-.0275	-.1100	-.2916								
120.000						-.0964								
130.000						.0684								
140.000						.0492								
150.000						.1729								
160.000						.3316								
170.000						.3134								
180.000	-.2676	.0767	.1922	.2763	.3755	.4336								

JAMES 68-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC002)

$$\text{MACH} (5) = 1.046 \quad \text{ALPHA} (5) = 14.910$$

DEPENDENT VARIABLE CP

37073601(1) MO11276

X/L	.0875	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
60,000	.1428	.1839	.1316												
70,000	.1352	.1955	.1466												
80,000	.1259	.1800	.1575												
90,000		.1691	-.0345	-.3152											
100,000					-.3185	-.2701	.0000	-.2311	-.2557	-.2759	-.2998	-.3101	-.3304		
110,000					-.3194	-.3108	-.2759	-.2631	-.2692	-.3153	-.3541	-.3660	-.3958	-.3924	
120,000					-.3694	-.3676	-.3669	-.3536	-.3901	-.4105	-.4422	-.4589	-.4034	-.4466	
130,000					-.4666								-.4053		
140,000					-.7040								-.3772		
150,000					-.9180								-.2804		
160,000					-.8769								-.1437		
170,000					-.8010								-.1089		
180,000					-.6718								-.0899		
80,000					-.5923	-.5245	-.4709	-.4077	-.3366	-.2439	-.1614	-.1007	-.0767	-.0393	

JAMES 86-639 PRESSURE VENTING - SHUTTLE ORBITER (REC002)

$$\text{MACH} (3) = 1.049 \quad \text{ALPHA} (6) = 17.370$$

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

Y/L	.0670	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
60.000	.1099	.1712	.1305												
70.000	.0942	.1767	.1440												
80.000	.0823	.1440	.1544												
90.000			.1691	-.0122	-.2940	-.2976	-.2517	.0000	-.2129	-.2583	-.2811	-.3074	-.2916	-.2001	-.3658
100.000						-.2965	-.2716	-.2540	-.2368	-.2659	-.2934	-.3489	-.3559	-.4195	-.3862
110.000						-.3685	-.3515	-.3470	-.3254	-.3663	-.4008	-.4244	-.4473	-.4079	-.4646
120.000						-.4496								-.4046	
130.000						-.6990								-.5840	
140.000						-.9262								-.4145	
150.000						-.8955								-.1103	
160.000						-.8159								-.0831	
170.000						-.6839								-.0534	
180.000						-.6015	-.5374	-.4688	-.3919	-.3121	-.2081	-.1223	-.0595	-.0374	-.0016

TABULATED SOURCE DATA - 1A29/OA63

DATE 24 MAR 74

(REC002)

JAMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACM} (6) = 1.096 \quad \text{ALPHA} (1) = 6.512$$

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

[illegible]

AMES 66-030 PRESSURE VENTING - SHUTTLE CRBITER

(REC002)

MACH (6) = 1.104 ALPHA (2) = 8.738

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0670 .1260 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .2077 .2333 .1710
 70.000 .2444 .2376 .1943
 80.000 .2504 .2310 .2046
 90.000 .2139 -.3505 -.2999 -.3061 -.2559 .0000 -.2163 -.2328 -.2364 -.2666 -.2464 -.1993 -.2972
 100.000 -.3063 -.3098 -.2719 -.2377 -.2340 -.2515 -.3026 -.3175 -.3431 -.2536
 110.000 -.3685 -.3629 -.3464 -.3131 -.3205 -.3464 -.3564 -.3762 -.3275 -.1919
 120.000 -.3887
 130.000 -.5899
 140.000 -.7569
 150.000 -.6743
 160.000 -.6228
 170.000 -.5217
 180.000 -.4488 -.3972 -.3643 -.3086 -.2738 -.2355 -.1465 -.1066 -.0400 -.0080

X/L

.4500 .4660 .4860 .5050 .5240 .5460 .5610 .5800 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.2153 -.2291 -.1855 .0486 .1865 .1972 .2343 .0000 .1649 .1341 .0993 .0160 -.0631 -.1182 .0000
 100.000 -.1596 -.2144 -.1738 .1172 .1779 .1872 .2020 .1991 .1851 .1081 .0983 .0249 -.0494 -.0856 -.1604
 110.000 -.2078 -.1286 -.0687 .1176 .1575 .1602 .1896 .1806 .1600 .1213 .0942 .0306 -.0190 -.0843 -.1228
 120.000 .1495
 130.000 .1417
 140.000 .1814
 150.000 .1939
 160.000 .1993
 170.000 .2120
 180.000 -.0326 .0035 .1027 .1519 .1729 .2085 .2110 .2127 .1989 .1742 .1697 .1417 .0994 .0652 .1039

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 .1293
 70.000 .0496 .2419 .0000
 80.000 -.0008 .1670 .2215
 90.000 -.2113 -.1470 -.1379 -.0917 -.0874 .0000 .1909
 100.000 -.2012 -.1869 -.0353 .0191 -.0413 -.0725
 110.000 -.1124 -.0734 .0670 .1065 .0243 -.1447
 120.000 .0109
 130.000 .1746
 140.000 .1651
 150.000 .2563
 160.000 .3949
 170.000 .3778
 180.000 -.1230 .2096 .2951 .3707 .4457 .4766

AMES 86-830 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD2)

MACH (6) = 1.096 ALPHA (3) = 10.780

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI														
60.000	.2282	.2569	.1851											
70.000	.2492	.2735	.2023											
80.000	.2500	.2629	.2108											
90.000		.2232	-.0314	-.2847	-.2937	-.2123	.0000	-.1691	-.2239	-.2239	-.2362	-.2324	-.1586	-.2640
100.000					-.2816	-.2645	-.2323	-.2044	-.2243	-.2424	-.2957	-.2936	-.3510	-.2918
110.000					-.3496	-.3137	-.3028	-.2858	-.3182	-.3336	-.3537	-.3680	-.3530	-.2167
120.000					-.3942								-.3619	
130.000					-.8068								-.1207	
140.000					-.7727								-.0975	
150.000					-.7132								-.0667	
160.000					-.6594								-.0395	
170.000					-.5402								-.0245	
180.000					-.4634	-.3621	-.3342	-.3172	-.2664	-.1815	-.0913	-.0319	-.0124	.0289

X/L	.4500	.4680	.4880	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	-.2879	-.2644	-.1543	-.0801	.1745	.1958	.1843	.0000	.1290	.0679	.0269	-.0399	-.1189	-.1655	.0003
100.000	-.2223	-.1576	-.1296	.0369	.1755	.1797	.1533	.1403	.1273	.0411	.0333	-.0310	-.0944	-.1217	-.2255
110.000	-.1829	-.1084	-.0727	.0056	.1569	.1464	.1304	.1203	.0980	.0615	.0166	-.0322	-.0616	-.1128	-.1934
120.000					.1410								-.0412		
130.000					.0780								-.0139		
140.000					.1287								-.0349		
150.000					.1585								-.0089		
160.000					.1606								.0279		
170.000					.1732								.0366		
180.000	.0840	.0736	.1036	.1577	.1735	.1736	.1713	.1653	.1451	.1282	.1230	.0935	.0708	.0473	.0229

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI									
60.000							.0201		
70.000							-.0518	.1524	.0000
80.000							-.1032	.0669	.1865
90.000	-.2977	-.2878	-.3092	-.1888	-.1774	.0000	-.1419	.0280	.1656
100.000	-.2471	-.2917	-.1954	-.0641	-.1147	-.2079			
110.000	-.2192	-.1917	-.0247	.0242	-.0406	-.2216			
120.000						-.0323			
130.000						.1214			
140.000						.1062			
150.000						.2198			
160.000						.3846			
170.000						.3639			
180.000	-.2190	.0957	.2310	.3194	.4293	.4844			

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(RECORD)

ANES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

MACH (4) = 1.096 ALPHA (4) = 12.910

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0875	.1200	.1640	.2033	.2420	.2840	.3010	.3190	.3360	.3570	.3750	.3940	.4030	.4310
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PMI

60.000	.2191	.2582	.2009											
70.000	.2332	.2775	.2139											
80.000	.2247	.2760	.2290											
90.000		.2400	-.0018	-.2500	-.2539	-.1938	.0000	-.1951	-.1845	-.1917	-.2140	-.2238	-.1444	-.2736
100.000					-.2557	-.2421	-.2074	-.1913	-.2066	-.2341	-.2847	-.2803	-.3050	-.3013
110.000					-.3169	-.2934	-.2860	-.2721	-.3069	-.3323	-.3462	-.3676	-.3272	-.3190
120.000					-.3827								-.3400	
130.000					-.6039								-.1551	
140.000					-.7907								-.1176	
150.000					-.7400								-.0528	
160.000					-.6750								-.0240	
170.000					-.5572								-.0070	
180.000					-.4757	-.4051	-.3625	-.3065	-.2496	-.1580	-.0713	-.0132	.0065	.0443

X/L

.4900	.4680	.4680	.5050	.5240	.5460	.5610	.5800	.5960	.6170	.6360	.6540	.6730	.6880	.7100
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PMI

90.000	-.2894	-.2714	-.2436	-.1399	.1666	.2061	.1946	.0000	.1232	.0546	.0037	-.0733	-.1412	-.1903	.0000
100.000	-.2680	-.2278	-.1770	-.0930	.1794	.1806	.1611	.1379	.1245	.0216	.0165	-.0599	-.1115	-.1393	-.2354
110.000	-.2391	-.1597	-.0708	-.0432	.1494	.1461	.1359	.1175	.0912	.0548	.0072	-.0478	-.0772	-.1186	-.1999
120.000					.1326	.0629								-.0538	
130.000					.1121	.1121								-.0294	
140.000					.1772	.1772								-.0628	
150.000					.1648	.1648								-.0321	
160.000					.1995	.1995								.0066	
170.000					.1987	.1987	.1871	.1745	.1509	.1325	.1108	.0789	.0550	.0182	.0108
180.000	.0768	.0908	.1451	.1724	.1908	.1987								.0304	

X/L

.7290	.7470	.7670	.7850	.8130	.8290	.8620	.9000	.9400
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PMI

60.000						-.0334		
70.000						-.1003	-.0075	.0000
80.000						-.1872	-.1080	.1274
90.000	-.3243	-.2762	-.2696	-.2662	-.2413	.0000	-.2507	-.1390
100.000	-.3202	-.3418	-.2575	-.1312	-.1542	-.2640		.1057
110.000	-.2309	-.2268	-.0734	-.0174	-.0843	-.2705		
120.000						-.0719		
130.000						.0667		
140.000						.0697		
150.000						.2201		
160.000						.3806		
170.000						.3486		
180.000	-.2244	-.0187	.2166	.0154	.4241			

JAMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC'D02)

$$\alpha_{\text{MgO}}(\theta) = 1.191 \quad \alpha_{\text{MgO}}(\theta) = 17.040$$

370735N 111 1 MO11235

DEPENDENT VARIABLE CP

W/L	.0670	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI															
60,000	.1943	.2324	.2682												
70,000	.1707	.2372	.2226												
80,000	.1695	.2226	.2361												
90,000			.2433	.0655	-.1971	-.1985	-.1806	.0000	-.1239	-.1596	-.1769	-.2143	-.1945	-.1032	-.2592
100,000						-.2012	-.1856	-.1643	-.1342	-.1789	-.2056	-.2588	-.2537	-.3134	-.2612
110,000						-.2052	-.2611	-.2582	-.2434	-.2753	-.3139	-.3290	-.3459	-.3091	-.3510
120,000						-.3522			-.3522					-.3124	
130,000						-.5907								-.4834	
140,000						-.6064								-.2740	
150,000						-.7793								-.0009	
160,000						-.6989								.0311	
170,000						-.5734								.0549	
180,000						-.4937	-.4373	-.3696	-.2978	-.2093	-.1206	-.0171	-.0392	.0766	-.0907

[illegible][illegible]

/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9100	.9400
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[illegible]

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECD002)

MACH (7) = 1.190 ALPHA (1) = 6.906

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2810	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
90.000	.2129	.2448	.1815											
70.000	.2310	.2748	.2049											
80.000	.2379	.2821	.2160											
90.000	.2226	-.0371	-.2711	-.2897	-.2342	.0000	-.1899	-.2297	-.2301	-.2485	-.2397	-.1378	-.2491	
100.000				-.2889	-.2921	-.2515	-.2255	-.2358	-.2480	-.2857	-.2758	-.2984	-.1896	
110.000				-.3561	-.3377	-.3274	-.2962	-.3131	-.3199	-.3190	-.2847	-.3649	-.1686	
120.000				-.3568								-.3918		
130.000				-.5372								-.1434		
140.000				-.6494								-.1375		
150.000				-.5916								-.1361		
160.000				-.5493								-.1257		
170.000				-.4742								-.1183		
180.000				-.4192	-.3189	-.3042	-.2829	-.2700	-.2366	-.2016	-.1353	-.1761	-.0556	
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5810	.5980	.6170	.6360	.6540	.6730	.6880	.7100

PHI														
90.000	-.1662	-.1505	-.1591	-.1243	-.1023	-.0568	-.0338	.0000	.0731	.0624	.0183	-.0217	-.0825	-.1118
100.000	-.1612	-.1569	-.1425	-.1219	-.0974	-.0680	-.0586	-.0032	.0586	.0304	.0143	-.0178	-.0660	-.0815
110.000	-.1563	-.1373	-.1179	-.1097	-.0980	-.0722	-.0529	-.0463	.0350	.0401	.0031	-.0221	-.0406	-.0693
120.000						-.0470								-.0183
130.000						-.0651								.0023
140.000						-.0370								.0100
150.000						-.0256								.0236
160.000						-.0232								.0354
170.000						-.0195								.0387
180.000	-.0386	-.0311	-.0223	-.0249	-.0171	-.0193	-.0260	-.0191	-.0122	.0078	.0346	.0517	.0507	.0643
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					

PHI														
90.000							.1586							
70.000							.0983	.2650	.0000					
80.000							.0262	.1979	.2555					
90.000	-.2253	.0363	-.1160	-.1128	.0000		-.0434	.1644	.2301					
100.000	-.2275	-.2168	-.1579	-.0092	-.0553	-.1389								
110.000	-.1812	-.1887	.0594	.0802	-.0463	-.1514								
120.000						.0373								
130.000						.2078								
140.000						.1985								
150.000						.2726								
160.000						.3883								
170.000						.3569								
180.000	-.1535	-.0865	.2607	.5339	.4103	.4590								

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

$$\text{MACH} (7) = 1.149 \quad \text{ALPHA} (2) = 8.715$$

SECTION (1) FUSELAGE

[illegible]

DATE 24 MAR 74

JAMES BA-837 PRESSURE VENTING - SHUTTLE ORBITER

(REC'D)

$$\text{ALPHA} (2) = 1.155 \quad \text{ALPHA} (3) = 10.770$$

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

1/L	.0675	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
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3

Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100																																																																																																																																											
1970	1316	2344	2119	05.000	02.47	-22.42	-2374	-2047	10000	-1770	-2190	-2317	-2435	-2276	-1845	-2761	1971	1434	2803	2451	06.000	-2376	-2340	-27.6	-2132	-2250	-2445	-2812	-3206	-2926	1972	1412	2883	2585	07.000	-2948	-3056	-2930	-2613	-3122	-3299	-3309	-3461	-3206	-3533	1973	190.000	-3263	-5236	-6826	-6296	-5622	-5027	-4417	-3800	-3536	-3267	-3022	-2626	-1843	-1242	-1014	-0446	1974	120.000	-5236	-6826	-6296	-5622	-5027	-4417	-3800	-3536	-3267	-3022	-2626	-1843	-1242	-1014	-0446	1975	130.000	-5236	-6826	-6296	-5622	-5027	-4417	-3800	-3536	-3267	-3022	-2626	-1843	-1242	-1014	-0446	1976	140.000	-5236	-6826	-6296	-5622	-5027	-4417	-3800	-3536	-3267	-3022	-2626	-1843	-1242	-1014	-0446	1977	150.000	-5236	-6826	-6296	-5622	-5027	-4417	-3800	-3536	-3267	-3022	-2626	-1843	-1242	-1014	-0446	1978	160.000	-5236	-6826	-6296	-5622	-5027	-4417	-3800	-3536	-3267	-3022	-2626	-1843	-1242	-1014	-0446	1979	170.000	-5236	-6826	-6296	-5622	-5027	-4417	-3800	-3536	-3267	-3022	-2626	-1843	-1242	-1014	-0446	1980	180.000	-5236	-6826	-6296	-5622	-5027	-4417	-3800	-3536	-3267	-3022	-2626	-1843	-1242	-1014	-0446	1981	190.000	-5236	-6826	-6296	-5622	-5027	-4417	-3800	-3536	-3267	-3022	-2626	-1843	-1242	-1014	-0446	1982	200.000	-5236	-6826	-6296	-5622	-5027	-4417	-3800	-3536	-3267	-3022	-2626	-1843	-1242	-1014	-0446	1983	210.000	-5236	-6826	-6296	-5622	-5027	-4417	-3800	-3536	-3267	-3022	-2626	-1843	-1242	-1014	-0446	1984	220.000	-5236	-6826	-6296	-5622	-5027	-4417	-3800	-3536	-3267	-3022	-2626	-1843	-1242	-1014	-0446	1985	230.000	-5236	-6826	-6296	-5622	-5027	-4417	-3800	-3536	-3267	-3022	-2626	-1843	-1242	-1014	-0446	1986	240.000	-

78

[illegible]

X/L
.7290 .7470 .7650 .8290 .8620 .9000 .9400

33

[illegible]

DATE 24 MAR 74

NAME SS-410 BEESSEE VENTING - SHUTTLE ORBITER (REC002)

$$\text{MACH} (7) = 1.149 \quad \text{ALPHA} (4) = 12.045$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

K/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
60.000	.1430	.2247	.1922												
70.000	.1605	.2469	.2104												
80.000	.1593	.2606	.2309												
90.000		.2457	.2457	.0120	-.2457	-.2526	-.1680	.0000	-.1598	-.2092	-.2144	-.2239	-.2336	-.1937	-.2795
100.000						-.2552	-.2342	-.2069	-.1918	-.2073	-.2323	-.2605	-.2669	-.3384	-.3136
110.000						-.3114	-.2831	-.2765	-.2662	-.2952	-.3217	-.3422	-.3615	-.3501	-.3466
120.000						-.3574								-.3587	
130.000						-.5617								-.2476	
140.000						-.7403								-.2081	
150.000						-.6933								-.1734	
160.000						-.6347								-.1425	
170.000						-.5452								-.1203	
180.000						-.4751	-.3932	-.3680	-.3303	-.3055	-.2462	-.1806	-.1273	-.1053	-.0680

FMI	-2835	-2917	-3122	-3092	-2971	-2416	-2087	.0000	-1584	-0692	-0368	-.0744	-.1439	-.1878	.0000
90.000															
100.000	-.3270	-.3334	-.3272	-.2827	-.2410	-.2248	-.2081	-.1959	-.1352	-.0910	.0223	-.0538	-.1166	-.1298	-.2240
110.000	-.3030	-.3212	-.2725	-.2424	-.2197	-.2139	-.1914	-.1741	-.1409	-.0743	.0134	-.0520	-.0936	-.1292	-.1781
120.000						-.1562								-.0900	
130.000						-.2428								-.0431	
140.000						-.1440								-.0312	
150.000						-.0762								-.0366	
160.000						-.0637								-.0354	
170.000						-.0444								-.0475	
180.000	-.0479	-.0433	-.0314	-.0389	-.0359	-.0474	-.0589	-.0603	-.0634	-.0550	-.0101	.0348	.0636	.0561	.0366

PMI					
60.000					
60.000					
70.000					
80.000					
90.000					
100.000					
110.000					
120.000					
130.000					
140.000					
150.000					
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830.000					
840.000					
850.000					
860.000					
870.000					
880.000					
890.000					
900.000					
910.000					
920.000					
930.000					
940.000					

SECTION (1) FUSELAGE

DEPENDENT VARIABLE OF

[illegible][illegible][illegible]

PMI	-2708	-3082	-3224	-3186	-3218	-3049	-2428	.0000	-.1765	-.0663	-.0291	-.0833	-.1743	-.2499	.0000
100.000	-.2708	-.3082	-3224	-3186	-3218	-3049	-2428	.0000	-.1765	-.0663	-.0291	-.0833	-.1743	-.2499	.0000
90.000	-.3241	-.3651	-3617	-3429	-3017	-.2676	-.2237	-.1987	-.1372	-.0521	.0005	-.0605	-.1214	-.1805	-.2745
80.000	-.4024	-.3820	-3489	-3001	-.2664	-.2408	-.1962	-.1811	-.1372	-.0352	-.0107	-.0611	-.0943	-.1452	-.2279
70.000						-.1834								-.0682	
60.000						-.2976								-.0474	
50.000						-.1925								-.1008	
40.000						-.0814								-.0499	
30.000						-.0784								.0167	
20.000						-.0501								.0364	
10.000	-.0322	-.0486	-.0424	-.0520	-.0320	-.0507	-.0398	-.0598	-.0813	-.0562	-.0213	.0449	.0628	.0487	.0185

.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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[illegible]

TABULATED SOURCE DATA - 1A29/OA83

DATE 24 MAR 74

(REC002)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACM (7) = 1.131 ALPHA (8) = 17.050

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
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PHI

60.000	.0731	.1211	.1796												
70.000	.0287	.1274	.1976												
80.000	-.0104	.1936	.2272												
90.000		.2436		.0401	-.2149	-.2223	-.1692	.0000	-.1465	-.2045	-.2097	-.2127	-.2273	-.1896	-.2912
100.000						-.2243	-.2017	-.1934	-.1729	-.1972	-.2234	-.2734	-.2822	-.3361	-.3153
110.000						-.2709	-.2589	-.2571	-.2508	-.2843	-.3139	-.3387	-.3620	-.3405	-.3891
120.000						-.3436								-.3450	
130.000						-.5580								-.5304	
140.000						-.7641								-.3947	
150.000						-.7385								-.1896	
160.000						-.6729								-.1463	
170.000						-.5679								-.1161	
180.000						-.4959	-.4309	-.3912	-.3415	-.3028	-.2270	-.1656	-.1187	-.0994	-.0601

X/L

.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PHI

90.000	-.2818	-.2957	-.3169	-.3123	-.3189	-.3193	-.3015	.0000	-.1284	.0152	.0159	-.1357	-.2000	-.2965	.0000
100.000	-.3327	-.3608	-.3596	-.3486	-.3426	-.3187	-.2792	-.1913	-.0171	.0563	.1210	-.0312	-.1503	-.1986	-.2804
110.000	-.4019	-.4051	-.3926	-.3760	-.3273	-.2686	-.2178	-.1795	-.0345	.0448	.0692	.0241	-.0415	-.1037	-.1957
120.000						-.1965								-.0321	
130.000						-.2056								.0127	
140.000						-.1976								-.0600	
150.000						-.0440								-.0551	
160.000						-.0849								.0264	
170.000						-.0824								.0604	
180.000	.0053	-.0900	-.0204	-.0651	-.0727	-.0592	-.0889	-.0189	.0911	.1600	.1463	.1345	.1107	.0382	.0534

X/L

.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI

60.000						-.1213		
70.000						-.2302	-.1521	.0000
80.000						-.2463	-.3307	.0894
90.000	-.4193	-.3235	-.4330	-.3656	-.3533	.0000	-.3467	-.1156
100.000	-.4300	-.4446	-.3595	-.1925	-.2180	-.3249		
110.000	-.2834	-.2443	-.0842	-.0524	-.1282	-.3336		
120.000						-.0843		
130.000						.0725		
140.000						.0185		
150.000						.2927		
160.000						.4570		
170.000						.3975		
180.000	-.2538	-.0487	.2350	.3391	.4591	.5418		

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AVES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (REC002)

MACH (0) = 1.232 ALPHA (1) = 6.555

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP											
X/L		.0870	.1260	.1640	.2030	.2420	.2810	.3200	.3590	.3980	.4370	.4760	.5150
PMI													
60.000	.1414	.1547	.1617										
70.000	.1692	.1762	.2026										
80.000	.1563	.1754	.2330										
90.000		.2463	.0170	-.2111	-.2342	-.2046	.0000	-.1655	-.1929	-.1923	-.1899	-.1810	-.1872
100.000				-.2336	-.2497	-.2181	-.1978	-.2048	-.2026	-.2206	-.2203	-.2512	-.1945
110.000				-.2924	-.2843	-.2843	-.2864	-.2583	-.2732	-.2763	-.2702	-.2494	-.3017
120.000				-.2879									-.3274
130.000				-.4527									-.1558
140.000				-.5516									-.1563
150.000				-.5017									-.1643
160.000				-.4660									-.1740
170.000				-.4417									-.1754
180.000				-.4069	-.2873	-.2703	-.2609	-.2507	-.2302	-.2255	-.1925	-.1676	-.1033
X/L	.4500	.4680	.4860	.5050	.5240	.5430	.5610	.5800	.5980	.6170	.6360	.6540	.6730
PMI													
90.000	-.1791	-.1676	-.1524	-.1386	-.1365	-.1371	-.1206	.0000	-.0561	-.0119	.0203	-.0241	-.0780
100.000	-.1698	-.1653	-.1466	-.1388	-.1330	-.1414	-.1328	-.1050	-.0551	-.0284	.0256	-.0186	-.0563
110.000	-.1517	-.1435	-.1353	-.1433	-.1392	-.1421	-.1259	-.1020	-.0693	-.0377	.0215	-.0130	-.0511
120.000						-.0902							-.0312
130.000						-.0864							-.0176
140.000						-.0626							-.0120
150.000						-.0464							-.0012
160.000						-.0385							.0076
170.000						-.0314							.0058
180.000	-.0805	-.0541	-.0422	-.0393	-.0284	-.0332	-.0387	-.0411	-.0438	-.0407	-.0241	-.0160	.0033
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400				
PMI													
60.000							.0602						
70.000							.0504	.1260	.0000				
80.000							.0049	.0182	.1624				
90.000	-.1826	-.0065	-.2085	-.1347	-.1129	.0000	-.1180	-.0375	.1296				
100.000	-.1826	-.2010	-.2130	-.0103	-.0509	-.1082							
110.000	-.1463	-.1949	.0029	.0676	.0184	-.1129							
120.000						.0679							
130.000						.2400							
140.000						.2144							
150.000						.2900							
160.000						.3656							
170.000						.3406							
180.000	-.1306	-.1313	.2222	.3109	.3957	.4735							

DATE 24 MAR 74

(REC002)

NAME: 66-637 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACH} (0) = 1.250 \quad \text{ALPHA} (2) = 6.667$$

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

1/L	.0670	.1260	.1640	.2030	.2420	.2640	.2620	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
-----	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

PW1

[illegible]

7/8

y/L
.4500 .4600 .4800 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

[illegible]

72

1/1	.7290	.7470	.7670	.7650	.6030	.8291	.8620	.9110	.9410
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241

60.000	-.2118	-.1698	-.2621	-.1697	-.1449	.0000	-.0152
70.000	-.2134	-.2274	-.2168	-.0561	-.0756	-.1356	-.0944
80.000	-.1908	-.1714	-.0503	.0334	-.0024	-.1297	-.1580
90.000						.0762	-.1879
100.000						.2050	-.0916
110.000						.1698	.1000
120.000						.2680	-.0051
130.000						.4166	.1620
140.000						.3522	
150.000						.5103	
160.000	-.1585	-.0119	.1939	.3206	.4143		
170.000							
180.000							

JAMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC992)

$$\text{MACH} (0) = 1.251 \quad \text{ALPHA} (3) = 10.730$$

SECTION (1) FUSELAGE

[illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(KFC92)

$$\text{MAC}(m) (6) = 1.249 \quad \text{ALPHA} (4) = 12.890$$

SECTION (1) FUSELAGE DEFENDENT VARIABLE CP

X/L	.0070	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI															
60.000	.1116	.1177	.1208												
70.000	.0936	.1255	.1465												
80.000	.0695	.1068	.1690												
90.000			.2662	.0640	-.1617	-.1844	-.1502	.0000	-.1267	-.1745	-.1764	-.1956	-.1856	-.1702	-.2350
100.000						-.1842	-.1846	-.1659	-.1524	-.1696	-.1884	-.2328	-.2354	-.2772	-.2626
110.000						-.2306	-.2259	-.2243	-.2157	-.2439	-.2666	-.2862	-.3027	-.2792	-.3226
120.000						-.2650								-.2666	
130.000						-.4547								-.2489	
140.000						-.6167								-.2112	
150.000						-.5797								-.1807	
160.000						-.5325								-.1482	
170.000						-.4764								-.1303	
180.000						-.4222	-.3431	-.3267	-.2975	-.2774	-.2455	-.1904	-.1412	-.1171	-.0758
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5900	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.2225	-.2453	-.2646	-.2642	-.2749	-.2764	-.2366	.0000	-.1625	-.1536	-.1281	-.1433	-.2170	-.2342	.0000
100.000	-.2677	-.2951	-.3037	-.2947	-.2908	-.2728	-.2150	-.1815	-.1435	-.1625	-.1157	-.1273	-.1826	-.1961	-.2129
110.000	-.3336	-.3368	-.3268	-.3037	-.2527	-.2181	-.1822	-.1625	-.1485	-.1384	-.1297	-.1204	-.1510	-.1759	-.1803
120.000						-.1632								-.1212	
130.000						-.2409								-.1200	
140.000						-.1299								-.1558	
150.000						-.0759								-.0953	
160.000						-.0580								-.0639	
170.000						-.0447								-.0588	
180.000	-.0656	-.0803	-.1051	-.1069	-.1047	-.1041	-.1040	-.10528	-.10645	-.10633	-.10590	-.10606	-.10542	-.10487	-.10441
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PHI															
60.000															
70.000															
80.000															
90.000	-.2953	-.2964	-.3468	-.3134	-.2145	.0000									
100.000	-.2943	-.3073	-.3012	-.1567	-.1493	-.1957									
110.000	-.2145	-.2649	-.1367	-.0394	-.0774	-.1929									
120.000						.0143									
130.000						.1251									
140.000						.0730									
150.000						.2762									
160.000						.4363									
170.000						.3713									
180.000	-.2023	-.0928	.0461	.3106	.4435	.3739									

1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

(REC002)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (0) = 1.251 ALPHA (0) = 17.010

SECTION 11/FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0070	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
60.000	.0923	.0946	.0664												
70.000	.0269	.0662	.0731												
80.000	.0023	.0304	.0946												
90.000			.1306	.1144	-.1477	-.1655	-.1396	.0000	-.1146	-.1500	-.1635	-.1665	-.1741	-.1696	-.2376
100.000						-.1651	-.1721	-.1549	-.1345	-.1406	-.1721	-.2203	-.2230	-.2699	-.2563
110.000						-.2124	-.2074	-.2064	-.1994	-.2268	-.2525	-.2728	-.2922	-.2728	-.3197
120.000						-.2642								-.2757	
130.000						-.4501								-.4455	
140.000						-.6397								-.3605	
150.000						-.6170								-.2081	
160.000						-.5642								-.1616	
170.000						-.4678								-.1364	
180.000						-.2246	-.3614	-.3424	-.3045	-.2811	-.2381	-.1822	-.1416	-.1226	-.0909

X/L	.4900	.6400	.6800	.9050	.9240	.9460	.9610	.9800	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
90.000	-.2205	-.2065	-.2477	-.2322	-.2572	-.2776	-.2704	.0000	-.2537	-.2394	-.2057	-.2478	-.2884	.0000
100.000	-.2516	-.2811	-.2675	-.2831	-.2852	-.3114	-.2975	-.2860	-.2142	-.2164	-.1998	-.1736	-.1823	-.2596
110.000	-.3283	-.3262	-.3363	-.3460	-.3378	-.3196	-.2799	-.2377	-.2053	-.1750	-.1598	-.1426	-.1384	-.1631
120.000						-.2335							-.1112	
130.000						-.3085							-.0976	
140.000						-.2909							-.1684	
150.000						-.1420							-.1339	
160.000						-.1144							-.0753	
170.000						-.0796							-.0619	
180.000	-.0816	-.0865	-.0540	-.0594	-.0551	-.0642	-.0782	-.0650	-.0948	-.0784	-.0753	-.0804	-.0563	-.0465

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PMI									
60.000							-.2545		
70.000							-.4001	-.1923	.0000
80.000							-.4872	-.4462	-.2107
90.000	-.3936	-.0759	-.4786	-.4635	-.3695	.0000	-.4007	-.4070	-.2637
100.000	-.3976	-.3877	-.4753	-.2786	-.2653	-.3039			
110.000	-.2979	-.3563	-.2036	-.1236	-.1693	-.2067			
120.000					-.0335				
130.000					.0645				
140.000					-.0125				
150.000					-.2428				
160.000					.4482				
170.000					.3504				
180.000	-.2421	-.2719	-.0672	.2409	.4597	.6147			

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0463

(RECORD)

AMES 06-030 PRESSURE VENTING - SHUTTLE ORBITER

MACH (9) = 1.402 ALPHA (1) = 0.471

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

N/L	.0470	.1200	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI														
90.000	.1326	.1456	.0976											
70.000	.1061	.1612	.1273											
60.000	.1648	.1708	.1648											
90.000		.2486	.0805	-.1340	-.1599	-.1558	.0000	-.1211	-.1551	-.1407	-.1596	-.1321	-.1673	-.1820
100.000					-.1608	-.1069	-.1744	-.1911	-.1569	-.1632	-.1897	-.1857	-.2148	-.1898
110.000					-.2174	-.2195	-.2276	-.2102	-.2150	-.2177	-.2202	-.2202	-.2310	-.1898
120.000					-.2080								-.2456	
130.000					-.3519								-.1443	
140.000					-.4335								-.1443	
150.000					-.3956								-.1536	
160.000					-.3712								-.1642	
170.000					-.3673								-.1749	
180.000					-.3523								-.1732	-.1299
N/L	.4900	.4680	.4680	.5050	.5240	.5467	.5810	.5900	.6170	.6360	.6540	.6750	.6880	.7100
PHI														
90.000	-.1655	-.1629	-.1507	-.1344	-.1277	-.1275	-.1233	.0000	-.0953	-.0709	-.0413	-.0618	-.0782	-.1081
100.000	-.1726	-.1702	-.1415	-.1249	-.1228	-.1355	-.1364	-.1218	-.0919	-.0949	-.0455	-.0510	-.0714	-.0773
110.000	-.1605	-.1355	-.1247	-.1286	-.1321	-.1437	-.1368	-.1228	-.1068	-.0813	-.0827	-.0534	-.0562	-.0739
120.000						-.0997							-.0470	
130.000						-.0921							-.0405	
140.000						-.0701							-.0369	
150.000						-.0548							-.0369	
160.000						-.0527							-.0332	
170.000						-.0459							-.0373	
180.000	-.0980	-.0631	-.0648	-.0613	-.0478	-.0462	-.0540	-.0515	-.0557	-.0548	-.0472	-.0479	-.0368	-.0249
N/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
90.000							-.0433							
70.000							-.1137	.0829	.0000					
60.000							-.1461	-.0693	.1332					
90.000	-.1284	-.0471	-.1912	-.1449	-.0874	.0000	-.1260	-.1826	.0820					
100.000	-.1475	-.1826	-.1929	-.0732	-.0196	-.0848								
110.000	-.1192	-.1469	-.0076	.0524	.0396	-.0516								
120.000						.1463								
130.000						.2692								
140.000						.2130								
150.000						.2825								
160.000						.3567								
170.000						.3123								
180.000	-.1034	-.1117	.1586	.2647	.3452	.4624								

ANES 00-050 PRESSURE VENTING - SHUTTLE ORBITER

(REC'D)

$$\text{MACM} (9) = 1.431 \quad \text{ALPMA} (2) = 0.575$$

SECTION (1) FUSELAGE

Z/L	.0070	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI															
60.000	.1461	.1415	.0999												
70.000	.1502	.1489	.1131												
80.000	.1404	.1336	.1421												
90.000		.1696	.1027	.1027	-.1257	-.1516	-.1402	.0000	-.1087	-.1447	-.1394	-.1546	-.1464	-.1636	-.1795
100.000						-.1529	-.1740	-.1535	-.1336	-.1441	-.1569	-.1844	-.1819	-.2108	-.1937
110.000						-.2023	-.1960	-.2102	-.1887	-.2055	-.2156	-.2199	-.2278	-.2220	-.2302
120.000						-.2034								-.2329	
130.000						-.3356								-.1673	
140.000						-.4561								-.1585	
150.000						-.4189								-.1580	
160.000						-.3912								-.1583	
170.000						-.3623								-.1707	
180.000						-.3624	-.2674	-.2421	-.2354	-.2292	-.2120	-.2018	-.1799	-.1634	-.1104
Z/L	.4900	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	-.1659	-.1745	-.1652	-.1607	-.1745	-.1652	-.1525	.0000	-.1354	-.1157	-.0819	-.0914	-.1243	-.1372	.0000
100.000	-.1937	-.2108	-.1972	-.1756	-.1640	-.1685	-.1609	-.1491	-.1244	-.1331	-.0849	-.0813	-.0906	-.1066	-.1500
110.000	-.2245	-.1996	-.1766	-.1756	-.1706	-.1792	-.1576	-.1413	-.1257	-.1136	-.0965	-.0860	-.0847	-.0967	-.1375
120.000						-.1219								-.1853	
130.000						-.1191								-.0847	
140.000						-.0875								-.0621	
150.000						-.0876								-.0533	
160.000						-.0621								-.0459	
170.000						-.0495								-.0476	
180.000	-.0916	-.0766	-.0594	-.0584	-.0536	-.0501	-.0508	-.0508	-.0569	-.0556	-.0491	-.0491	-.0461	-.1435	-.0177
Z/L	.7290	.7470	.7670	.7850	.8030	.8290	.8420	.9000	.9000	.9400					
PMI															
60.000															
70.000															
80.000															
90.000	-.1640	-.0376	-.2262	-.2110	-.1192	.0000									
100.000	-.1825	-.1842	-.2265	-.0946	-.0553	-.0975									
110.000	-.1519	-.1799	-.0682	.0221	.0012	-.0767									
120.000						.1157									
130.000						.2185									
140.000						.1686									
150.000						.2666									
160.000						.3942									
170.000						.3276									
180.000	-.1322	-.1396	.0674	.2759	.3625	.3276									

TABULATED SOURCE DATA - 1429/0A63

DATE 24 MAR 74

(REC002)

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

MACH (9) = 1.401 ALPHA (3) = 10.610

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0870	.1260	.1640	.2030	.2420	.2810	.3200	.3590	.3980	.3370	.3750	.3940	.4050	.4310
PMI														
60.000	.1361	.1333	.0871											
70.000	.1259	.1362	.0963											
80.000	.1129	.1357	.1176											
90.000		.1176	.1169	.1187	.1169	.1154	.1199	.0937	.1342	.1306	.1408	.1371	.1344	.1772
100.000					.1459	.1459	.1332	.1306	.1302	.1427	.1739	.1757	.2055	.1963
110.000					.1853	.1853	.1828	.1858	.1722	.2076	.2189	.2274	.2168	.2436
120.000						.1932							.2252	
130.000						.3564							.1978	
140.000						.4726							.1761	
150.000						.4393							.1633	
160.000						.4080							.1598	
170.000						.3950							.1585	
180.000						.3720	.2785	.2562	.2515	.2348	.2157	.2012	.1692	.1093

X/L	.4500	.4600	.4680	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PMI															
90.000	.1675	.1763	.1870	.1909	.1971	.2113	.2106	.0000	.1809	.1515	.1176	.1188	.1437	.1824	.0000
100.000	.2019	.2233	.2226	.2168	.2143	.2222	.2064	.1861	.1579	.1631	.1173	.1055	.1195	.1353	.1738
110.000	.2520	.2554	.2550	.2426	.2171	.2006	.1842	.1693	.1572	.1423	.1215	.1066	.0994	.1213	.1723
120.000						.1573								.0828	
130.000						.1414								.1018	
140.000						.0995								.0921	
150.000						.0771								.0744	
160.000						.0622								.0554	
170.000						.0522								.0337	
180.000	.0671	.0807	.0646	.0610	.0548	.0508	.0539	.0506	.0546	.0579	.0501	.0537	.0537	.0465	.0400

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI									
60.000							.1032		
70.000							.1869	.1053	.0000
80.000							.1971	.1995	.0173
90.000	.2160	.0636	.2518	.2643	.1732	.0000	.1941	.2298	.1127
100.000	.2198	.2192	.2487	.1414	.1009	.1255			
110.000	.1766	.2067	.1282	.0145	.0298	.1146			
120.000						.0874			
130.000						.1824			
140.000						.1285			
150.000						.2726			
160.000						.4225			
170.000						.3735			
180.000	.1490	.0981	.0184	.2556	.4012	.5974			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (REC002)

MACH (9) = 1.400 ALPHA (4) = 12.860

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0670 .1260 .1840 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PHI

60.000 .1336 .1223 .0777
 70.000 .1011 .1243 .0832
 80.000 .0694 .1143 .0913
 90.000 .1169 .1004 .1031 .11069 .0000 .0844 .1197 .1172 .1310 .1285 .1512 .1703
 100.000 .1273 .1389 .1199 .1189 .1314 .1662 .1688 .2040 .1980
 110.000 .1655 .1653 .1700 .1613 .1821 .1992 .2115 .2271 .2113 .2500
 120.000 .1876
 130.000 .3502
 140.000 .4865
 150.000 .4583
 160.000 .4247
 170.000 .4068
 180.000 .3791 .2874 .2699 .2523 .2377 .2148 .1975 .1656 .1500 .1103
 190.000 .4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .6170 .6360 .6540 .6730 .6880 .7100

X/L

PHI

90.000 .1056 .1130 .1195 .1925 .2047 .2221 .2265 .0000 .2238 .1983 .1536 .1460 .1651 .1981 .0000
 100.000 .2044 .2285 .2322 .2231 .2294 .2500 .2488 .2452 .2012 .1951 .1388 .1251 .1346 .1592 .2044
 110.000 .2615 .2628 .2675 .2679 .2662 .2699 .2467 .2088 .1801 .1603 .1398 .1285 .1137 .1388 .1876
 120.000 .1869
 130.000 .2176
 140.000 .1237
 150.000 .0885
 160.000 .0662
 170.000 .0481
 180.000 .0924 .0821 .0647 .0615 .0505 .0483 .0540 .0361 .0651 .0662 .0595 .0593 .0511 .0449 .0502
 190.000 .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

X/L

PHI

60.000
 70.000
 80.000
 90.000 .2440 .1416 .2961 .3139 .2402 .0000
 100.000 .2440 .2525 .2877 .1954 .1471 .1808
 110.000 .1931 .2291 .1628 .1049 .0636 .1662
 120.000
 130.000 .1334
 140.000 .0654
 150.000 .2693
 160.000 .4062
 170.000 .3811
 180.000 .1734 .1878 .2003 .2347 .3994 .6403

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (6) = 1.402 ALPHA (6) = 16.060

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
60.000	.1099	.0932	.0634												
70.000	.0445	.0808	.0681												
80.000	.0113	.0443	.0500												
90.000		.0617	.0472	.0094	-.1121	-.1114	.0000	-.0813	-.0990	-.0888	-.1088	-.1121	-.1374	-.1612	
100.000					-.1140	-.1344	-.1208	-.1024	-.1110	-.1227	-.1442	-.1576	-.1755	-.1801	
110.000					-.1564	-.1468	-.1583	-.1446	-.1672	-.1896	-.2017	-.2162	-.1858	-.2340	
120.000					-.1890										
130.000					-.3386										
140.000					-.5057										
150.000					-.4876										
160.000					-.4472										
170.000					-.4144										
180.000					-.3695	-.3045	-.2849	-.2670	-.2452	-.2263	-.1987	-.1588	-.1400	-.1016	
X/L	.4900	.4680	.4860	.5050	.5240	.5460	.5810	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100

X/L	.4900	.4680	.4860	.5050	.5240	.5460	.5810	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1501	-.1667	-.1817	-.1841	-.1903	-.2100	-.2044	.0000	-.2208	-.2248	-.2239	-.2294	-.2406	-.2756	.0000
100.000	-.1878	-.2158	-.2147	-.2154	-.2145	-.2422	-.2339	-.2452	-.2286	-.2475	-.2136	-.2051	-.1961	-.2094	-.2439
110.000	-.2479	-.2550	-.2569	-.2705	-.2632	-.2848	-.2899	-.2720	-.2469	-.2094	-.1942	-.1790	-.1505	-.1760	-.2062
120.000						-.2610									
130.000						-.2732									
140.000						-.2675									
150.000						-.1130									
160.000						-.0943									
170.000						-.0676									
180.000	-.0329	-.0878	-.0717	-.0717	-.0696	-.0684	-.0682	-.0813	-.0870	-.0989	-.1001	-.0947	-.0911	-.0839	-.1022
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						

PHI

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
60.000									
70.000									
80.000									
90.000	-.2317	-.1732	-.4035	-.4323	-.3709	.0000			
100.000	-.3547	-.3417	-.4029	-.2972	-.2528	-.3024			
110.000	-.2543	-.3051	-.2380	-.1175	-.1316	-.2684			
120.000						-.0148			
130.000						.0648			
140.000						-.0737			
150.000						.2734			
160.000						.3959			
170.000						.4034			
180.000	-.2092	-.2375	-.0785	.0404	.3601	.7311			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD002)

MACH (10) = 1.501 ALPHA (1) = 0.300

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0070 .1200 .1640 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PMI

60.000 .1373 .1491 .0926

70.000 .1703 .1566 .1065

80.000 .1718 .1640 .1276

90.000 .1580 .1046 .0951

100.000 .1207 .1180 .0000

110.000 .1214 .1402 .1338

120.000 .1770 .1747 .1793

130.000 .1599 .1599 .1599

140.000 .2964 .2964 .2964

150.000 .3716 .3716 .3716

160.000 .3374 .3374 .3374

170.000 .3187 .3187 .3187

180.000 .3194 .3194 .3194

190.000 .3087 .3087 .3087

200.000 .2215 .2215 .2215

210.000 .5610 .5610 .5610

220.000 .5460 .5460 .5460

230.000 .5030 .5030 .5030

240.000 .4660 .4660 .4660

250.000 .4500 .4500 .4500

260.000 .4600 .4600 .4600

270.000 .4311 .4311 .4311

280.000 .4297 .4297 .4297

290.000 .4267 .4267 .4267

300.000 .4114 .4114 .4114

310.000 .3825 .3825 .3825

320.000 .3772 .3772 .3772

330.000 .3598 .3598 .3598

340.000 .3450 .3450 .3450

350.000 .3413 .3413 .3413

360.000 .3347 .3347 .3347

370.000 .3366 .3366 .3366

380.000 .3411 .3411 .3411

390.000 .3512 .3512 .3512

400.000 .3571 .3571 .3571

410.000 .3670 .3670 .3670

420.000 .3750 .3750 .3750

430.000 .3830 .3830 .3830

440.000 .3820 .3820 .3820

450.000 .3620 .3620 .3620

460.000 .3420 .3420 .3420

470.000 .3220 .3220 .3220

480.000 .3020 .3020 .3020

490.000 .2820 .2820 .2820

500.000 .2620 .2620 .2620

510.000 .2420 .2420 .2420

520.000 .2220 .2220 .2220

530.000 .2020 .2020 .2020

540.000 .1820 .1820 .1820

550.000 .1620 .1620 .1620

560.000 .1420 .1420 .1420

570.000 .1220 .1220 .1220

580.000 .1020 .1020 .1020

590.000 .0820 .0820 .0820

600.000 .0620 .0620 .0620

DATE 24 MAR 74 TABULATED SOURCE DATA - IA29/OA63

(REC002)

AMES 66-63D PRESSURE VENTING - SHUTTLE ORBITER

MACH (10) = 1.500 ALPHA (2) = 0.509

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0875	.1260	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
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PHI

60.000	.1490	.1357	.0876											
70.000	.1472	.1438	.0987											
80.000	.1397	.1440	.1167											
90.000		.1494	.1334	-.0848	-.1067	-.1009	.0000	-.0759	-.1054	-.0970	-.1078	-.1041	-.1310	-.1433
100.000					-.1167	-.1269	-.1146	-.1015	-.1083	-.1158	-.1373	-.1387	-.1667	-.1583
110.000					-.1571	-.1528	-.1608	-.1534	-.1688	-.1740	-.1778	-.1835	-.2303	-.1918
120.000						-.1519							-.2801	
130.000						-.2959							-.1457	
140.000						-.3847							-.1352	
150.000						-.3528							-.1354	
160.000						-.3304							-.1415	
170.000						-.3291							-.1494	
180.000						-.3155	-.2288	-.1960	-.1905	-.1743	-.1710	-.1594	-.1489	-.1124

X/L

.4500	.4680	.4660	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PHI

90.000	-.1356	-.1403	-.1473	-.1459	-.1471	-.1490	-.1403	-.1255	-.1083	-.0769	-.0741	-.0999	-.1016	.0000
100.000	-.1616	-.1748	-.1702	-.1542	-.1387	-.1427	-.1386	-.1399	-.1169	-.0857	-.0712	-.0772	-.0812	-.1243
110.000	-.1910	-.1788	-.1578	-.1492	-.1372	-.1403	-.1334	-.1321	-.1197	-.1143	-.0986	-.0763	-.0606	-.1116
120.000					-.1072								-.0567	
130.000					-.1023								-.0748	
140.000					-.0692								-.0527	
150.000					-.0484								-.0458	
160.000					-.0428								-.0398	
170.000					-.0327								-.0374	
180.000	-.0871	-.0760	-.0522	-.0480	-.0393	-.0340	-.0329	-.0323	-.0361	-.0363	-.0293	-.0335	-.0321	-.0346

X/L

.7290	.7470	.7670	.7830	.8030	.8290	.8620	.9000	.9400
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PHI

60.000						-.0826		
70.000						-.1577	-.0298	.0000
80.000						-.1499	-.1570	.0775
90.000	-.1432	-.0536	-.1933	-.2113	-.1243	-.1317	-.1421	-.0180
100.000	-.1475	-.1585	-.1940	-.1025	-.0543			
110.000	-.1226	-.1538	-.0783	.0249	.0116			
120.000						.1429		
130.000						.2429		
140.000						.1678		
150.000						.2773		
160.000						.3663		
170.000						.3127		
180.000	-.1162	-.1222	-.0659	.2292	.3458			

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECD02)

MACH (10) = 1.499 ALPHA (3) = 10.370

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1200	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4090	.4310
PMI														
60.000	.1464	.1303	.0845											
70.000	.1249	.1308	.0950											
80.000	.1192	.1297	.1080											
90.000		.0800	.0705	.0983	.0865	.0000	.0634	.0955	.0883	.1015	.1001	.1292	.1423	
100.000				.1003	.1152	.1024	.0893	.0957	.1046	.1322	.1344	.1646	.1591	
110.000				.1351	.1392	.1316	.1396	.1572	.1659	.1719	.1823	.2014	.2005	
120.000				.1451								.2404		
130.000				.2934								.1708		
140.000				.4015								.1528		
150.000				.3728								.1438		
160.000				.3465								.1462		
170.000				.3400								.1469		
180.000				.3235	.2410	.2135	.2062	.2000	.1838	.1775	.1616	.1460	.1068	
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
90.000	.1127	.1433	.1521	.1523	.1611	.1790	.1820	.0000	.1691	.1111	.1025	.1295	.1491	.0000
100.000	.1644	.1832	.1821	.1777	.1790	.1965	.1925	.1783	.1515	.1126	.0980	.1005	.1016	.1537
110.000	.2110	.2114	.2125	.2090	.1958	.1860	.1769	.1678	.1500	.1182	.1095	.0833	.0956	.1424
120.000					.1446							.0715		
130.000					.1212							.0767		
140.000					.0808							.0769		
150.000					.0599							.0627		
160.000					.0487							.0487		
170.000					.0356							.0453		
180.000	.0855	.0876	.0903	.0442	.0374	.0356	.0369	.0350	.0374	.0362	.0384	.0367	.0384	.0478
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PMI														
60.000							.1170							
70.000							.1970	.0971	.0990					
80.000							.1921	.1866	.0147					
90.000	.1786	.0843	.2268	.2507	.1816	.0000	.1761	.2031	.1748					
100.000	.1783	.1876	.2271	.1519	.0959	.1094								
110.000	.1908	.1344	.1316	.0088	.0177	.0940								
120.000					.1202									
130.000					.2020									
140.000					.1214									
150.000					.2648									
160.000					.3955									
170.000					.3633									
180.000	.1415	.1334	.0277	.2041	.3650	.6105								

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (REC002)

MACH (10) = 1.499 ALPHA (4) = 12.700

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
60.000	.1364	.1230	.0821												
70.000	.1032	.1229	.0891												
80.000	.0860	.1119	.0967												
90.000		.1191	.0797	-.0374	-.0917	-.0820	.0000	-.0587	-.0887	-.0809	-.0954	-.0944	-.1257	-.1301	
100.000				-.0919	-.0919	-.1050	-.0891	-.0772	-.0868	-.0954	-.1261	-.1299	-.1612	-.1349	
110.000				-.1250	-.1250	-.1255	-.1353	-.1265	-.1477	-.1594	-.1673	-.1807	-.1829	-.2009	
120.000				-.1393	-.1393								-.2098		
130.000				-.2942	-.2942								-.2072		
140.000				-.4149	-.4149								-.1730		
150.000				-.3905	-.3905								-.1525		
160.000				-.3609	-.3609								-.1466		
170.000				-.3492	-.3492								-.1415		
180.000				-.3296	-.3296	-.2522	-.2286	-.2207	-.2120	-.1929	-.1825	-.1590	-.1409	-.0966	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1259	-.1412	-.1519	-.1552	-.1666	-.1841	-.1864	.0000	-.1898	-.1806	-.1595	-.1468	-.1567	-.1733	.0000
100.000	-.1604	-.1619	-.1867	-.1821	-.1874	-.2071	-.2122	-.2150	-.1980	-.2046	-.1483	-.1279	-.1217	-.1287	-.1882
110.000	-.2145	-.2148	-.2196	-.2272	-.2303	-.2421	-.2392	-.2225	-.1889	-.1614	-.1328	-.1221	-.1081	-.1176	-.1681
120.000						-.2042	-.2042							-.0941	
130.000						-.1835	-.1835							-.1092	
140.000						-.1068	-.1068							-.1219	
150.000						-.0754	-.0754							-.0802	
160.000						-.0584	-.0584							-.0604	
170.000						-.0408	-.0408							-.0582	
180.000	-.0794	-.0863	-.0514	-.0503	-.0431	-.0382	-.0417	-.0408	-.0462	-.0475	-.0451	-.0518	-.0509	-.0530	-.0616

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
60.000									
70.000									
80.000									
90.000	-.2070	-.0611	-.2694	-.2934	-.2321	.0000	-.2023	-.2106	-.2370
100.000	-.2144	-.2190	-.2696	-.1925	-.1339	-.1588			
110.000	-.1794	-.2131	-.1618	-.0303	-.0476	-.1305			
120.000						.0688			
130.000						.1553			
140.000						.0686			
150.000						.2628			
160.000						.3833			
170.000						.3675			
180.000	-.1833	-.1742	-.0382	.1623	.3651	.6487			

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0A63

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AMES 64-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD2)

MACH (10) = 1.500 ALPHA (5) = 14.780

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4090 .4310

PHI

80.000 .1363 .1196 .0807
 90.000 .0840 .1122 .0836
 100.000 .0592 .0914 .0877
 110.000 .0965 .0603 .0543
 120.000 .0834 .0762 .0000
 130.000 .0652 .0995 .0836
 140.000 .1160 .1190 .1254
 150.000 .1371
 160.000 .2051
 170.000 .4273
 180.000 .4071
 190.000 .3741
 200.000 .3623
 210.000 .3532
 220.000 .2602
 230.000 .2369
 240.000 .2278
 250.000 .2122
 260.000 .1919
 270.000 .1794
 280.000 .1497
 290.000 .1335
 300.000 .0973
 310.000 .0680
 320.000 .6080
 330.000 .7100

X/L

PHI

90.000 .1195 .1366 .1511
 100.000 .1536 .1789 .1863
 110.000 .2126 .2132 .2194
 120.000 .2325
 130.000 .3000
 140.000 .1546
 150.000 .0876
 160.000 .0641
 170.000 .0446
 180.000 .0808
 190.000 .0703
 200.000 .0552
 210.000 .0302
 220.000 .0452
 230.000 .0417
 240.000 .0484
 250.000 .0517
 260.000 .0620
 270.000 .0665
 280.000 .0699
 290.000 .0671
 300.000 .0657
 310.000 .0747

X/L

PHI

80.000 .2273
 90.000 .3575
 100.000 .3290
 110.000 .2627
 120.000 .2573
 130.000 .2792
 140.000 .2806
 150.000 .2006
 160.000 .1669
 170.000 .1682
 180.000 .0545
 190.000 .1126
 200.000 .0056
 210.000 .2407
 220.000 .3720
 230.000 .3666
 240.000 .3494
 250.000 .3493
 260.000 .0493
 270.000 .3494
 280.000 .3494
 290.000 .3494
 300.000 .3494
 310.000 .3494

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/OA63

AMES 64-630 PRESSURE VENTING - SHUTTLE ORBITER (REC003)

MACH (1) = 1.751 ALPHA (1) = 6.210

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

R/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PMI									
130.000						.3092			
140.000						.1307			
150.000						.1701			
160.000						.1729			
170.000						.1623			
180.000	-.0621	-.1062	.0541	.1653	.2239	.3452			

MACH (1) = 1.751 ALPHA (2) = 6.372

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

R/L	.0670	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
PMI															
60.000	.2009	.1669	.1145												
70.000	.1666	.1706	.1235												
80.000	.1796	.1747	.1342												
90.000		.1601	.0926	-.0303	-.0375	-.0494	-.0446	-.0390	-.0426	-.0449	.0000	-.0679			
100.000				-.0583	-.0547	-.0460	-.0519	-.0386	-.0698	-.0715	-.0665	-.0849			
110.000				-.0662	-.0715	-.0787	-.0816	-.0972	-.1025	-.1084	-.1106	-.0000	-.1183		
120.000					-.0578									-.1644	
130.000					-.1694									-.1497	
140.000					-.2685									-.1307	
150.000					-.2553									-.1293	
160.000					-.2346									-.1350	
170.000					-.2408									-.1378	-.1234
180.000					-.2402	-.1996	-.1616	-.1445	-.1423	-.1353	-.1384	-.1378	-.1378	-.1378	
R/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100

PMI

R/L	.0670	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
PMI															
90.000	-.0670	-.0696	-.0756	-.0750	-.0801	-.0920	-.0915	-.0985	-.0991	-.0940	-.0765	-.0700	-.0851	-.0385	.0000
100.000	-.0936	-.0990	-.1016	-.0965	-.0973	-.1064	-.1077	-.1119	-.1052	-.1054	-.0954	-.0757	-.0798	-.1026	
110.000	-.1246	-.1246	-.1251	-.1294	-.1294	-.1356	-.1308	-.1267	-.1253	-.1236	-.1169	-.1033	-.0851	-.0654	-.1098
12.000						-.1540								-.1024	
130.000						-.1169								-.0336	
140.000						-.0979								-.0796	
150.000						-.0779								-.0659	
160.000						-.0647								-.0559	
170.000						-.0611								-.0506	
180.000	-.1107	-.0968	-.0736	-.0704	-.0646	-.0567	-.0561	-.0536	-.0511	-.0492	-.0440	-.0455	-.0453	-.0461	-.0253
R/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						

PMI

DATE 24 MAR 74

JAMES 68-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

$$\text{MACM} (1) = 1.751 \quad \text{ALPHA} (2) = 0.372$$

SECTION 111 FUSELAGE

[illegible]
$$\alpha_{\text{MCM}}(1) = 1.752 \quad \alpha_{\text{MMA}}(3) = 10.420$$

SECTION (1) FUSELAGE

W/L	.0070	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI															
60,000	.2005	.1690	.1143												
70,000	.1667	.1630	.1171												
80,000	.1506	.1537	.1244												
90,000			.1441	.0692	-.0277	-.0529	-.0439	.0000	-.0257	-.0297	-.0263	-.0319	-.0369	.0000	-.0615
100,000						-.0566	-.0400	-.0336	-.0305	-.0363	-.0453	-.0602	-.0635	-.0619	-.0836
110,000						-.0509	-.0515	-.0616	-.0636	-.0662	-.0951	-.1015	-.1077	.0000	-.1210
120,000						-.0467								.0000	
130,000						-.1645								-.2045	
140,000						-.2726								-.1776	
150,000						-.2666								-.1482	
160,000						-.2437								-.1425	
170,000						-.2467								-.1439	
180,000						-.2467	-.2104	-.1763	-.1615	-.1564	-.1506	-.1521	-.1507	-.1451	-.1269

FBI

[illegible]

(RECONS)

AMES 64-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (1) = 1.752 ALPHA (3) = 10.420

SECTION (1) FUSELAGE DEFENDENT VARIABLE CP

X/L .4500 .4600 .4680 .4800 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

60.0000 .0730
 70.0000 .0649
 80.0000 .0577
 90.0000 .0505
 100.0000 .0433
 110.0000 .0361
 120.0000 .0290
 130.0000 .0220
 140.0000 .0150
 150.0000 .0080
 160.0000 .0010
 170.0000 .0000
 180.0000 .0000

PHI

60.0000 .0730
 70.0000 .0649
 80.0000 .0577
 90.0000 .0505
 100.0000 .0433
 110.0000 .0361
 120.0000 .0290
 130.0000 .0220
 140.0000 .0150
 150.0000 .0080
 160.0000 .0010
 170.0000 .0000
 180.0000 .0000

MACH (1) = 1.752 ALPHA (4) = 12.500

SECTION (1) FUSELAGE DEFENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3360 .3570 .3750 .3940 .4050 .4310

PHI

60.0000 .1072 .1537 .1120
 70.0000 .1450 .1481 .1112
 80.0000 .1165 .1332 .1143
 90.0000 .1346 .1064 .1027
 100.0000 .1056 .0844 .0807
 110.0000 .0842 .0640 .0602
 120.0000 .0637 .0435 .0397
 130.0000 .0432 .0230 .0192
 140.0000 .0227 .0025 .0000
 150.0000 .0020 .0000 .0000
 160.0000 .0000 .0000 .0000
 170.0000 .0000 .0000 .0000
 180.0000 .0000 .0000 .0000

PHI

60.0000 .1072 .1537 .1120
 70.0000 .1450 .1481 .1112
 80.0000 .1165 .1332 .1143
 90.0000 .1346 .1064 .1027
 100.0000 .1056 .0844 .0807
 110.0000 .0842 .0640 .0602
 120.0000 .0637 .0435 .0397
 130.0000 .0432 .0230 .0192
 140.0000 .0227 .0025 .0000
 150.0000 .0020 .0000 .0000
 160.0000 .0000 .0000 .0000
 170.0000 .0000 .0000 .0000
 180.0000 .0000 .0000 .0000

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0A63

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AMES 66-630 PRESSUFF VENTING - SHUTTLE ORBITER (RECD003)

MACH (1) = 1.752 ALPHA (4) = 12.500

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.4300	.4600	.4800	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
90.000	-.0610	-.0675	-.0720	-.0774	-.0853	-.0992	-.0975	-.1003	-.1042	-.0933	-.0917	-.0920	-.1012	-.1196
100.000	-.0693	-.0970	-.1009	-.1021	-.1060	-.1191	-.1182	-.1243	-.1151	-.1212	-.1168	-.1129	-.1085	-.1485
110.000	-.1332	-.1360	-.1403	-.1426	-.1460	-.1539	-.1530	-.1538	-.1541	-.1566	-.1575	-.1486	-.1352	-.1560
120.000						-.2612							-.1506	
130.000						-.2885							-.1511	
140.000						-.1324							-.1648	
150.000						-.1039							-.0940	
160.000						-.0861							-.0761	
170.000						-.0724							-.0610	
180.000	-.1066	-.0947	-.0740	-.0743	-.0675	-.0630	-.0627	-.0621	-.0596	-.0532	-.0538	-.0482	-.0504	-.0346

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PMI									
60.000							-.2522		
70.000							-.2281	-.2247	.0000
80.000							-.1757	-.1998	-.1998
90.000	-.1635	-.0681	-.1634	-.2165	-.2131	.0000	-.1399	-.1798	-.2012
100.000	-.1635	-.1591	-.1934	-.1948	-.1031	-.0997			
110.000	-.1527	-.1671	-.1674	-.0454	-.0107	-.0720			
120.000						.1177			
130.000						.1124			
140.000						.0473			
150.000						.0802			
160.000						.1757			
170.000						.2008			
180.000	-.1605	-.1704	-.0473	-.0241	.2515	.5496			

MACH (1) = 1.752 ALPHA (5) = 14.540

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
60.000	-.1780	.1523	.1171												
70.000	.1278	.1416	.1138												
80.000	-.0940	.1174	.1140												
90.000		.1256	.0904	-.0280	-.0496	-.0414	.0000	-.0294	-.0283	-.0322	-.0375	-.0397	.0000	-.0573	
100.000				-.0492	-.0448	-.0367	-.0361	-.0316	-.0361	-.0445	-.0535	-.0630	-.0729	-.0797	
110.000				-.0467	-.0498	-.0568	-.0560	-.0560	-.0742	-.0865	-.0986	-.1100	.0000	-.1255	
120.000					-.0582								.0000		
130.000					-.1819								-.2903		
140.000					-.2958								-.2572		
150.000					-.3017								-.1802		

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TABULATED SOURCE DATA - 1A29/0A63

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (REC003)

MACH (1) = 1.732 ALPHA (6) = 16.620

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0670	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4090	.4310
PHI															
60.000	.1833	.1619	.1250												
70.000	.1217	.1459	.1208												
80.000	.0893	.1126	.1041												
90.000		.0997	.0802	-.0451	-.0680	-.0551	.0000	-.0442	-.0462	-.0448	-.0437	-.0460	.0000	-.0638	
100.000					-.0632	-.0549	-.0487	-.0473	-.0487	-.0321	-.0551	-.0621	-.0709	-.0783	
110.000					-.0565	-.0535	-.0602	-.0635	-.0789	-.0898	-.0992	-.1060	.0000	-.1202	
120.000					-.0666								.0000	.0000	
130.000					-.1844								-.3094	-.2933	
140.000					-.3056								-.2105	-.1785	
150.000					-.3149								-.1556	-.1454	-.1185
160.000					-.2958										
170.000					-.2863										
180.000					-.2891	-.2429	-.2082	-.1934	-.1856	-.1738	-.1666	-.1533			
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100	

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PHI									
90.000	-.0669	-.0723	-.0780	-.0800	-.0825	-.0953	-.0954	-.1029	-.1032
100.000	-.0659	-.0950	-.1004	-.1009	-.1012	-.1137	-.1135	-.1199	-.1110
110.000	-.1290	-.1326	-.1343	-.1366	-.1403	-.1436	-.1489	-.1328	-.1523
120.000						-.2712			
130.000						-.2917			
140.000						-.3140			
150.000						-.1813			
160.000						-.1272			
170.000						-.0940			
180.000	-.1077	-.0989	-.0800	-.0811	-.0777	-.0764	-.0789	-.0795	-.0761
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PHI									
60.000									
70.000									
80.000									
90.000	-.1782	-.1166	-.1779	-.2933	-.2802	.0000			
100.000	-.1779	-.1832	-.2156	-.2176	-.1615	-.1538			
110.000	-.1574	-.1787	-.1887	-.0914	-.0468	-.1086			
120.000						.0715			
130.000						.0349			
140.000						-.0299			
150.000						.1020			
160.000						.1758			
170.000						.1679			
180.000	-.1632	-.1766	-.0928	-.0917	.1910	.5878			

DATE 24 MAR 74

TABULATED SOURCE DATA - 1429/0463

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AMES 66-63D PRESSURE VENTING - SHUTTLE ORBITER (RECORDS)

MACH (2) = 2.016 ALPHA (1) = 6.703

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP											
X/L		.0870	.1260	.1640	.2030	.2420	.2810	.3200	.3590	.3980	.4370	.4760	.5150
PMI													
60.000		.1973	.1637	.1146									
70.000		.1981	.1678	.1236									
80.000		.1920	.1728	.1341									
90.000			.1537		.0907	-.0211	-.0478	-.0469	.0000	-.0346	-.0414	-.0384	-.0396
100.000						-.0470	-.0422	-.0431	-.0458	-.0510	-.0549	-.0595	-.0608
110.000							-.0487	-.0537	-.0619	-.0689	-.0845	-.0889	-.0902
120.000								-.0267					.0000
130.000								-.1171					-.1452
140.000								-.1969					-.1383
150.000								-.1949					-.1267
160.000								-.1828					-.1229
170.000								-.1852					-.1205
180.000								-.1858	-.1730	-.1548	-.1358	-.1182	-.1175
													-.1211
													-.1172
X/L		.4500	.4880	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730
PMI													
90.000		-.0510	-.0564	-.0611	-.0587	-.0611	-.0644	-.0632	-.0690	-.0734	-.0678	-.0652	-.0640
100.000		-.0697	-.0762	-.0765	-.0750	-.0736	-.0786	-.0778	-.0928	-.0787	-.0822	-.0790	-.0693
110.000		-.0985	-.0987	-.0955	-.0964	-.0979	-.1003	-.0962	-.0974	-.0965	-.0985	-.0939	-.0842
120.000							-.1279						-.0985
130.000							-.0947						-.0874
140.000							-.0880						-.0699
150.000							-.0775						-.0582
160.000							-.0746						-.0506
170.000							-.0676						-.0448
180.000		-.1127	-.1068	-.0899	-.0822	-.0748	-.0649	-.0605	-.0562	-.0497	-.0459	-.0462	-.0415
													-.0262
X/L		.7290	.7470	.7670	.7830	.8030	.8290	.8620	.9000	.9400			
PMI													
60.000													
70.000													
80.000													
90.000		-.0937	-.0869	-.1198	-.1273	-.1238	.0000						
100.000		-.0901	-.1041	-.1192	-.1105	-.0454	-.0187						
110.000		-.0814	-.0977	-.1000	-.0126	.0434	.0169						
120.000							.2369						
130.000							.2729						
140.000							.1516						
150.000							.1282						
160.000							.1421						
170.000							.1483						
180.000		-.0776	-.0951	-.0239	.1022	.1722	.2392						

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORDS)

MACH (2) = 2.018 ALPHA (2) = 0.841

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0670 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3360 .3570 .3750 .3940 .4030 .4310

PHI

90.000 .1918 .1623 .1141

70.000 .1736 .1608 .1162

60.000 .1644 .1581 .1259

50.000 .1422 .0839 -.0233

40.000 -.0462 -.0459 .0000

30.000 -.0476 -.0397 -.0365

20.000 -.0397 -.0456 -.0585

10.000 -.0396 -.0396 -.0794

0.000 -.1181 -.1181 -.0830

-10.000 -.2034 -.2034 -.0874

-20.000 -.2034 -.2034 -.0900

-30.000 -.1939 -.1939 -.0922

-40.000 -.1933 -.1933 -.0900

-50.000 -.1933 -.1933 -.1707

-60.000 -.1933 -.1933 -.1576

-70.000 -.1933 -.1933 -.1377

-80.000 -.1933 -.1933 -.1290

-90.000 -.1933 -.1933 -.1279

-100.000 -.1933 -.1933 -.1270

-110.000 -.1933 -.1933 -.1186

-120.000 -.1933 -.1933 -.1186

-130.000 -.1933 -.1933 -.1186

-140.000 -.1933 -.1933 -.1186

-150.000 -.1933 -.1933 -.1186

-160.000 -.1933 -.1933 -.1186

-170.000 -.1933 -.1933 -.1186

-180.000 -.1933 -.1933 -.1186

-190.000 -.1933 -.1933 -.1186

-200.000 -.1933 -.1933 -.1186

-210.000 -.1933 -.1933 -.1186

-220.000 -.1933 -.1933 -.1186

-230.000 -.1933 -.1933 -.1186

-240.000 -.1933 -.1933 -.1186

-250.000 -.1933 -.1933 -.1186

-260.000 -.1933 -.1933 -.1186

-270.000 -.1933 -.1933 -.1186

-280.000 -.1933 -.1933 -.1186

-290.000 -.1933 -.1933 -.1186

-300.000 -.1933 -.1933 -.1186

-310.000 -.1933 -.1933 -.1186

-320.000 -.1933 -.1933 -.1186

-330.000 -.1933 -.1933 -.1186

-340.000 -.1933 -.1933 -.1186

-350.000 -.1933 -.1933 -.1186

-360.000 -.1933 -.1933 -.1186

-370.000 -.1933 -.1933 -.1186

-380.000 -.1933 -.1933 -.1186

-390.000 -.1933 -.1933 -.1186

-400.000 -.1933 -.1933 -.1186

JAMES 66-630 PRESSURE VENTING - SHUTTLE CRIBITER (RECORD)

MACH (2) = 2.018 ALPHA (3) = 10.870

SECTION (1) FUSELAGE
DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2810	.3200	.3590	.3980	.4370	.4760	.5150	.5540	.5930	.6320	.6710	.7100
PW																	
60.000	.1872	.1565	.1119														
70.000	.1596	.1316	.1122														
80.000	.1421	.1416	.1155														
90.000			.1258	.0729	-.0298	-.0508	-.0458	.0000	-.0358	-.0332	-.0323	-.0317	-.0356	.0000	-.0454		
100.000					-.0529	-.0432	-.0397	-.0364	-.0373	-.0397	-.0455	-.0502	-.0567	-.0629			
110.000					-.0376	-.0408	-.0476	-.0520	-.0638	-.0734	-.0766	-.0822	.0000	-.0929			
120.000					-.0309								.0000				
130.000					-.1221								-.2001				
140.000					-.2131								-.1811				
150.000					-.2178								-.1491				
160.000					-.2049								-.1178				
170.000					-.2040								-.1339				
180.000					-.2043	-.1928	-.1731	-.1532	-.1426	-.1347	-.1351	-.1330	-.1315	-.1226			
X/L	.4500	.4880	.4880	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100		

[illegible]

Phi					
60.000					
60.000					
60.000					
90.000					
100.000					
110.000					
120.000					
130.000					
140.000					
150.000					
160.000					
170.000					
180.000					

MACH (2) = 2.021 ALPHA (4) = 12.985

AMES 66-63D PRESSURE VENTING - SHUTTLE ORBITER (RECD003)

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
60.000	.1815	.1546	.1104												
70.000	.1429	.1452	.1076												
80.000	.1165	.1247	.1048												
90.000		.1072	.0809	-.0343	-.0561	-.0483	.0000	-.0376	-.0372	-.0357	-.0381	-.0379	.0000	-.0462	
100.000					-.0550	-.0480	-.0421	-.0387	-.0392	-.0410	-.0442	-.0494	-.0353	-.0391	
110.000					-.0410	-.0404	-.0462	-.0474	-.0590	-.0651	-.0721	-.0827	.0000	-.0930	
120.000					-.0343								.0000		
130.000					-.1300								-.2207		
140.000					-.2179								-.2034		
150.000					-.2275								-.1807		
160.000					-.2158								-.1465		
170.000					-.2138								-.1377		
180.000					-.2144	-.2001	-.1795	-.1588	-.1486	-.1422	-.1404	-.1371	-.1339	-.1200	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.0575	-.0476	-.0529	-.0541	-.0562	-.0650	-.0673	-.0713	-.0765	-.0797	-.0727	-.0698	-.0678	-.0701	.0000
100.000	-.0629	-.0662	-.0694	-.0718	-.0738	-.0783	-.0812	-.0878	-.0846	-.0881	-.0881	-.0884	-.0826	-.0759	-.0923
110.000	-.0982	-.0971	-.0986	-.1009	-.1021	-.1108	-.1064	-.1107	-.1136	-.1188	-.1179	-.1197	-.1095	-.1069	-.1101
120.000					-.2205								-.1533		
130.000					-.2275								-.1721		
140.000					-.1597								-.1930		
150.000					-.1174								-.1295		
160.000					-.0928								-.0875		
170.000					-.0786								-.0689		
180.000	-.1062	-.0953	-.0800	-.0780	-.0718	-.0684	-.0678	-.0664	-.0649	-.0646	-.0579	-.0594	-.0568	-.0594	-.0502

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
-----	-------	-------	-------	-------	-------	-------	-------	-------	-------

PHI

60.000							-.2124		
70.000							-.1919	-.1882	.0000
80.000							-.1461	-.1530	-.1709
90.000	-.0928	-.0787	-.1361	-.1603	-.1652	.0000	-.1060	-.1294	-.1348
100.000	-.1107	-.1188	-.1427	-.1461	-.1297	-.0821			
110.000	-.1070	-.1237	-.1415	-.0874	-.0196	-.0248			
120.000					.1319				
130.000					.0685				
140.000					-.0167				
150.000					.0223				
160.000					.1401				
170.000					.1606				
180.000	-.1130	-.1326	-.0611	-.0614	.1398	.4418			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORDS)

MACH (2) = 2.919 ALPHA (6) = 17.940

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0470	.1280	.1640	.2030	.2420	.2840	.2620	.3010	.3190	.3380	.3370	.3750	.3940	.4030	.4310
PMI															
60.000	.1646	.1447	.1067												
70.000	.1052	.1224	.0993												
80.000	.0683	.0861	.0450												
90.000			.0624	.0291	-.0491	-.0691	-.0619	.0000	-.0552	-.0520	-.0500	-.0494	-.0493	.0000	-.0552
100.000						-.0671	-.0607	-.0561	-.0540	-.0534	-.0511	-.0497	-.0511	-.0549	-.0579
110.000						-.0561	-.0561	-.0584	-.0622	-.0683	-.0706	-.0741	-.0761	.0000	-.0641
120.000						-.0529								.0000	
130.000						-.1328								-.2430	
140.000						-.2328								-.2360	
150.000						-.2421								-.2033	
160.000						-.2323								-.1695	
170.000						-.2259								-.1412	
180.000						-.2264	-.2096	-.1137	-.1660	-.1967	-.1465	-.1441	-.1362	-.1297	-.1185

PMI	.4500	.4600	.4660	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
90.000	-.0535	-.0549	-.0576	-.0602	-.0602	-.0693	-.0724	-.0765	-.0794	-.0849	-.0820	-.0878	-.0924	.0000
91.000	-.0611	-.0661	-.0705	-.0752	-.0735	-.0799	-.0814	-.0866	-.0843	-.0880	-.0894	-.0843	-.0814	-.0988
110.000	-.0662	-.0911	-.0935	-.0952	-.0997	-.1046	-.1063	-.1124	-.1115	-.1150	-.1150	-.1060	-.1046	-.1124
120.000						-.2315							-.1573	
						-.2295							-.1744	
140.000						-.2451							-.1846	
150.000						-.2150							-.2046	
160.000						-.1309							-.1649	
170.000						-.0964							-.1176	
80.000	-.1079	-.1006	-.0667	-.0635	-.0611	-.0791	-.0814	-.0863	-.0849	-.0880	-.0863	-.0901	-.0930	-.0908

[illegible]

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(REC004) (16 OCT 73)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

PARAMETRIC DATA

DETA = -2.000 ELEVTR = -15.000
 AIRLON = .000 RUDDER = .000
 RN/L = 3.500

REFERENCE DATA

SREF = .0000 IN. YMRP = .0000 IN.
 LREF = .0000 IN. YMRP = .0000 IN.
 BREF = .0000 IN. YMRP = .0000 IN.
 SCALE = .0150 SCALE

MACH (1) = .599 ALPHA (1) = 6.195

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.3380	.3970	.3940	.4050	.4310
PMI											
60.000	.0351	.0217	-.0752								
70.000	.0925	.0255	-.0740								
80.000	.0529	-.0093	-.0819								
90.000		-.0899	-.2833	-.3372	-.2091	-.1470	.0000	-.1011	-.1524	-.1103	-.0789
100.000					-.2142	-.1779	-.1594	-.1279	-.1113	-.1011	-.1024
110.000					-.2429	-.2283	-.2088	-.1572	-.1362	-.1135	-.1024
120.000					-.2661						-.0983
130.000					-.4111						-.0951
140.000					-.3751						-.0954
150.000					-.2872						-.0792
160.000					-.2451						-.0907
170.000					-.2406						-.0685
180.000					-.2241	-.1712	-.1485	-.1291	-.1237	-.0855	-.0642
											-.0609
											-.0507
X/L	.4500	.4800	.4860	.5050	.5240	.5480	.5810	.5800	.6170	.6360	.6540
PMI											
90.000	-.0720	-.0898	-.0742	-.0749	-.0727	-.0929	-.0892	.0000	-.1253	-.1716	-.2152
100.000	-.0941	-.1050	-.1009	-.0749	-.0879	-.1059	-.1233	-.1346	-.1095	-.1611	-.2029
110.000	-.0958	-.0942	-.1006	-.1012	-.1094	-.1281	-.1092	-.1227	-.1217	-.1439	-.1727
120.000					-.1221						-.1836
130.000					-.0921						-.0890
140.000					-.0899						-.0532
150.000					-.0570						-.0387
160.000					-.0561						-.0284
170.000					-.0558						-.0178
180.000	-.0469	-.0600	-.0521	-.0530	-.0517	-.0516	-.0612	-.0622	-.0554	-.0609	-.0526
											-.0336
											-.0226
											-.0389
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400		
PMI											
60.000											
70.000											
80.000											
90.000	-.1503	.0079	-.0042	.0290	.0590	.0000	.0905	.0682	.0213		
100.000	-.0381	-.0798	-.0172	.0778	.0704	.0819					
110.000	-.0660	.0166	.0342	.1511	.1319	.0516					
120.000					.0047						

DATE 24 MAR 74 TABULATED SOURCE DATA - 1429/0463

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECD004)

MACH (1) = .599 ALPHA (1) = 6.195

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8420 .9000 .9400

PHI
130.000 .0130
140.000 -.1141
150.000 .0030
160.000 .0911
170.000 .1444
180.000 -.0507 .0736 .1176 .1469 .1791 .1855

MACH (1) = .800 ALPHA (2) = 6.234

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0670 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI
60.000 .0279 .0123 -.1023
70.000 .0522 .0246 -.0879
80.000 .0276 .0200 -.0648
90.000 -.0909 -.2711 -.3526
100.000 -.2261 -.2197 -.1812 -.1569 -.1299
110.000 -.2819 -.2326 -.1589 -.1347
120.000 -.2928
130.000 -.4361
140.000 -.4106
150.000 -.2921
160.000 -.2616
170.000 -.2363
180.000 -.2316
190.000 -.1641
200.000 -.1513
210.000 -.1497
220.000 -.1106
230.000 -.0850
240.000 -.0615
250.000 -.0764
260.000 -.0508
270.000 -.0680
280.000 .7100
290.000 .0000
300.000 -.1248
310.000 -.1541
320.000 -.1296
330.000 -.1043
340.000 -.0669
350.000 -.1207
360.000 -.1196
370.000 -.1207
380.000 -.4741
390.000 -.7195
400.000 -.1359
410.000 -.1087
420.000 -.0938
430.000 -.1062
440.000 -.1008
450.000 -.0764
460.000 -.0508

X/L .4510 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI
90.000 -.1005
100.000 -.1261
110.000 -.1197
120.000 -.1248
130.000 -.1016
140.000 -.1355
150.000 -.1324
160.000 -.1390
170.000 -.1507
180.000 -.1400
190.000 -.1290
200.000 -.1066
210.000 -.0824
220.000 -.0802
230.000 -.0609
240.000 -.0567
250.000 -.0541
260.000 -.0652
270.000 -.0836
280.000 -.0737
290.000 -.0456
300.000 -.0450
310.000 -.0746
320.000 -.0505
330.000 -.0277
340.000 .0209
350.000 .0000
360.000 -.2379
370.000 -.2039
380.000 -.1625
390.000 -.1891
400.000 -.1363
410.000 -.1039
420.000 -.0695
430.000 -.0592
440.000 -.0701
450.000 -.0444
460.000 -.0322
470.000 -.0277
480.000 .0209

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8420 .9000 .9400

PHI

TABLE 1. SUMMARY OF DATA FOR THE 12 STUDIES

RECEIVED - SHUTTLE ORBITER
(REC004)

$$\text{MACM} (1) = .655 \quad \text{ALPHA} (2) = 0.234$$

DEFINITION / USAGE PAGE

[illegible]

三

[illegible]
$$\text{MACM} (1) = .000 \quad \text{ALPHA} (3) = 10.320$$

DEPENDENT VARIABLE OF

W/L	.1740	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
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三

[illegible]

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

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[illegible]

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(RECORD)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (1) = .620 ALPHA (3) = 10.320

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.4500	.4600	.4800	.5000	.5200	.5400	.5600	.5800	.6100	.6300	.6500	.6700	.6900	.7100
PHI														
60.000														
100.000														
160.000														
X/L	.4500	.4600	.4800	.5000	.5200	.5400	.5600	.5800	.6100	.6300	.6500	.6700	.6900	.7100
PHI														
60.000														
100.000														
160.000														

PHI														
60.000														
100.000														
160.000														
PHI														
60.000														
100.000														
160.000														

MACH (1) = .590 ALPHA (4) = 12.390

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0800	.1200	.1600	.2000	.2400	.2800	.3200	.3600	.4000	.4400	.4800	.5200	.5600	.6000	.6400	.6800	.7200
PHI																	
60.000																	
100.000																	
160.000																	
X/L	.0800	.1200	.1600	.2000	.2400	.2800	.3200	.3600	.4000	.4400	.4800	.5200	.5600	.6000	.6400	.6800	.7200
PHI																	
60.000																	
100.000																	
160.000																	

PHI

DATE 24 MAR 74
TABULATED SOURCE DATA - 1A29/OA63

(continued)

WMS 64-837 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACM} (1) = .599 \quad \text{ALPHA} (4) = 12.390$$

DEPENDENT VARIABLE CP

SECTION (1) FUSE! AGE

[illegible]

MACH (1) = .500 ALPHA (5) = 14.543

SECTION 111 FUSELAGE

X/L	.0075	.1260	.1640	.2035	.2420	.2640	.2620	.3010	.3190	.3380	.3570	.3940	.4310
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													
37													
38													
39													
40													
41													
42													
43													
44													
45													
46													
47													
48													
49													
50													

PMI					
160.000	- .2924				- .1137
170.000	- .2739				- .0890
180.000	- .2592	- .1880	- .1539	- .1198	- .0771
190.000					- .0960
					- .0662
					- .0843

x/L	.4500	.4600	.4660	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
-----	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

[illegible]

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
-----	-------	-------	-------	-------	-------	-------	-------	-------	-------

PHI					
60.000				.1354	.0000
70.000				.0691	.1440
80.000				.0095	.0468
90.000				.0207	.0245
100.000				.0000	.0175

90,000	-.3157	-.2268	-.1641	-.1280	-.1197	-.0000
100,000	-.2556	-.1516	-.0950	-.0634	-.0666	-.0401
110,000	-.1744	-.1085	-.0448	.0484	.0277	-.0458
120,000						-.0346
130,000						-.0669
140,000						-.1946
150,000						-.1943
160,000						.1150
170,000						.1067
180,000	-.1504	.0248	.0876	.1115	.1759	.2125

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC004)

MACH (1) = .600 ALPHA (C) = 16.550

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0070 .1260 .1840 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

FHI

60.000 -.0427 -.0294 -.1196
 70.000 -.0765 -.0243 -.1285
 80.000 -.1288 -.0845 -.1154
 90.000 -.1546 -.2840 -.4195
 100.000
 110.000
 120.000
 130.000
 140.000
 150.000
 160.000
 170.000
 180.000

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

FHI

90.000
 100.000
 110.000
 120.000
 130.000
 140.000
 150.000
 160.000
 170.000
 180.000

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

FHI

60.000
 70.000
 80.000
 90.000
 100.000
 110.000
 120.000
 130.000
 140.000
 150.000
 160.000
 170.000
 180.000

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A23/0A63

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (2) = .750 ALPHA (1) = 8.313

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1200 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3370 .3750 .3940 .4050 .4310

PHI

60.000 .0550 .0361 -.0690
70.000 .0491 .0492 -.0795
80.000 .0457 .0116 -.0845
90.000 -.0770 -.2941 -.4246
100.000 -.2391 -.1772 .0000
110.000 -.2656 -.2067 -.1703
120.000 -.2880 -.2532 -.2397
130.000 -.3039
140.000 -.4645
150.000 -.4508
160.000 -.4035
170.000 -.4048
180.000 -.4756
190.000 -.4135
200.000 -.2474
210.000 -.1323
220.000 -.0961
230.000 -.0769
240.000 -.0591
250.000 -.0491
260.000 -.0523
270.000 -.0475
280.000 -.0420
290.000 -.0360
300.000 -.0360
310.000 -.0360
320.000 -.0360
330.000 -.0360
340.000 -.0360
350.000 -.0360
360.000 -.0360
370.000 -.0360
380.000 -.0360
390.000 -.0360
400.000 -.0360
410.000 -.0360
420.000 -.0360
430.000 -.0360
440.000 -.0360
450.000 -.0360
460.000 -.0360
470.000 -.0360
480.000 -.0360
490.000 -.0360
500.000 -.0360

X/L

PHI

60.000 -.0777 -.0730 -.0688
70.000 -.0759 -.0679 -.0658
80.000 -.0640 -.0624 -.0610
90.000 -.0610
100.000 -.0592
110.000 -.0592
120.000 -.0592
130.000 -.0592
140.000 -.0592
150.000 -.0592
160.000 -.0592
170.000 -.0592
180.000 -.0592
190.000 -.0592
200.000 -.0592
210.000 -.0592
220.000 -.0592
230.000 -.0592
240.000 -.0592
250.000 -.0592
260.000 -.0592
270.000 -.0592
280.000 -.0592
290.000 -.0592
300.000 -.0592
310.000 -.0592
320.000 -.0592
330.000 -.0592
340.000 -.0592
350.000 -.0592
360.000 -.0592
370.000 -.0592
380.000 -.0592
390.000 -.0592
400.000 -.0592
410.000 -.0592
420.000 -.0592
430.000 -.0592
440.000 -.0592
450.000 -.0592
460.000 -.0592
470.000 -.0592
480.000 -.0592
490.000 -.0592
500.000 -.0592

X/L

PHI

60.000 .2141
70.000 .1648
80.000 .1349
90.000 .1027
100.000 .0770
110.000 .0523
120.000 .0361
130.000 .0203
140.000 .0082
150.000 .0111
160.000 .0079
170.000 .0079
180.000 .0079
190.000 .0079
200.000 .0079
210.000 .0079
220.000 .0079
230.000 .0079
240.000 .0079
250.000 .0079
260.000 .0079
270.000 .0079
280.000 .0079
290.000 .0079
300.000 .0079
310.000 .0079
320.000 .0079
330.000 .0079
340.000 .0079
350.000 .0079
360.000 .0079
370.000 .0079
380.000 .0079
390.000 .0079
400.000 .0079
410.000 .0079
420.000 .0079
430.000 .0079
440.000 .0079
450.000 .0079
460.000 .0079
470.000 .0079
480.000 .0079
490.000 .0079
500.000 .0079

TABULATED SOURCE DATA - 1A29/0A63

(RECORD)

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

MACH (2) = .750 ALPHA (3) = 10.330

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.0376	.0468	-.0683											
70.000	.0434	.0378	-.0709											
80.000	.0230	.0331	-.0487											
90.000		-.0546	-.2865	-.3978	-.2844	-.1954	.0000	-.1653	-.2218	-.1815	-.1753	-.1298	-.0776	-.1592
100.000					-.2714	-.2451	-.2208	-.1558	-.1717	-.1595	-.1756	-.1411	-.1900	-.1265
110.000					-.3205	-.3090	-.3095	-.2556	-.2197	-.1785	-.1779	-.1585	-.2559	-.1684
120.000					-.3725								-.3430	
130.000					-.5651								-.1406	
140.000					-.5079								-.0978	
150.000					-.5234								-.1159	
160.000					-.5514								-.0860	
170.000					-.5617								-.0758	
180.000					.5635	-.3945	-.2240	-.1260	-.1088	-.0842	-.0555	-.0508	-.0506	-.0414
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.1149	-.1325	-.1204	-.1256	-.1227	-.1459	-.1317	.0000	-.2985	-.3459	-.4118	-.4144	-.3944	.0000
100.000	-.1382	-.1619	-.1516	-.1380	-.1306	-.1805	-.1780	-.2015	-.3134	-.3059	-.3702	-.3747	-.3509	-.2630
110.000	-.1593	-.1703	-.1577	-.1737	-.1858	-.2021	-.2015	-.2278	-.2417	-.2665	-.3075	-.3320	-.3317	-.2201
120.000						-.1753							-.1911	
130.000						-.1503							-.1693	
140.000						-.1516							-.1658	
150.000						-.1138							-.1322	
160.000						-.1002							-.1199	
170.000						-.0909							-.0946	
180.000	-.0555	-.0647	-.0450	-.0820	-.0760	-.0820	-.0914	-.1122	-.1165	-.1093	-.1202	-.1151	-.0972	-.0154
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000							.1812							
70.000							.1173	.1632	.0000					
80.000							.0797	.0756	.0525					
90.000	-.2984	-.1358	-.1159	-.0475	-.0074	.0000	.0401	.0604	.0081					
100.000	-.2089	-.1002	-.0570	.0077	.0159	.0052								
110.000	-.1535	-.0475	.0159	.0550	.0221	-.0144								
120.000						.0004								
130.000						-.0219								
140.000						-.1174								
150.000						-.0452								
160.000						.0832								
170.000						.0855								
180.000	-.1991	.0312	.0737	.1081	.1753	.2335								

AMES 06-030 PRESSURE VENTING - SHUTTLE ORBITER (RECD04)

MACW (2) = .730 ALPHA (3) = 14.700

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0670	.1280	.1840	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
60.000	-.0089	.0347	-.0690												
70.000	-.0201	.0143	-.0708												
80.000	-.0781	-.0156	-.0743												
90.000		-.0914	-.2397	-.4586	-.3240	-.2370	.0000	-.2254	-.2334	-.2249	-.2302	-.1928	-.1532	-.2168	-.1928
100.000					-.3177	-.2980	-.2766	-.2407	-.2217	-.2214	-.2342	-.2082	-.2064	-.1928	-.1928
110.000					-.3373	-.3561	-.3915	-.3289	-.2991	-.2972	-.2793	-.2493	-.2659	-.2386	-.2386
120.000					-.4358								-.2856		
130.000					-.6478								-.1813		
140.000					-.5817								-.1666		
150.000					-.5852								-.1366		
160.000					-.6848								-.1303		
170.000					-.6600								-.0953		
180.000					-.6330	-.4514	-.3096	-.1932	-.1013	-.0762	-.0567	-.0391	-.0546	-.0772	

X/L	.4300	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1879	-.1656	-.1858	-.1714	-.1709	-.2260	-.2060	.0000	-.2887	-.3362	-.3981	-.4810	-.5194	-.4919	.0000
100.000	-.2118	-.2307	-.2257	-.2024	-.1864	-.2397	-.2351	-.2468	-.2615	-.4045	-.3690	-.4479	-.4370	-.3778	-.3390
110.000	-.2407	-.2318	-.2349	-.2312	-.2344	-.2609	-.2607	-.2937	-.2903	-.3236	-.3610	-.3975	-.3655	-.3250	-.2854
120.000						-.2202								-.2250	
130.000						-.2521								-.2136	
140.000						-.2772								-.2685	
150.000						-.2007								-.2621	
160.000						-.1630								-.1744	
170.000						-.1217								-.1411	
180.000	-.0863	-.0805	-.0719	-.0787	-.0973	-.1073	-.1393	-.1678	-.1321	-.1596	-.1637	-.1645	-.1464	-.1211	-.0688

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
60.000							.0122		
70.000							-.0575	.0790	.0000
80.000							-.0902	-.0252	.0302
90.000	-.4277	-.3125	-.2596	-.2217	-.2180	.0000	-.0780	-.0472	-.0265
100.000	-.3366	-.2068	-.2084	-.1216	-.1558	-.1599			
110.000	-.2450	-.1972	-.0682	-.0313	-.0753	-.1941			
120.000						-.1283			
130.000						-.1095			
140.000						-.2159			
150.000						-.1464			
160.000						.0764			
170.000						.0299			
180.000	-.2482	-.0231	.0291	.0672	.1580	.2478			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC004)

MACH (3) = .850 ALPHA (3) = 10.620

SECTION 111 FUSELAGE DEPENDENT VARIABLE CP

X/L	.0670	.1260	.1640	.2030	.2420	.2840	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
PMI														
60.000	.0640	.0661	-.0342											
70.000	.0791	.0710	-.0222											
80.000	.0635	.0705	-.0217											
90.000		-.0149	-.2295	-.5257	-.4040	-.1952	.0000	-.2246	-.2590	-.2195	-.1908	-.1302	-.0844	-.1597
100.000				-.3502	-.2448	-.2701	-.2665	-.2299	-.2034	-.2021	-.1712	-.2040	-.1381	
110.000				-.3490	-.2916	-.3552	-.3343	-.2653	-.2400	-.1925	-.1894	-.2366	-.1515	
120.000				-.3691								-.3057		
130.000				-.4611								-.1309		
140.000				-.5436								-.1098		
150.000				-.6123								-.0995		
160.000				-.6523								-.0930		
170.000				-.6615								-.0573		
180.000				-.6583	-.6356	-.5775	-.4823	-.3480	-.2311	-.1282	-.0695	-.0477	-.0126	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
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PMI

90.000	-.1076	-.1059	-.0977	-.0725	-.0600	-.1049	-.0970	.0000	-.1681	-.2411	-.2895	-.3657	-.4811	-.5269	.0000
100.000	-.1390	-.1519	-.1375	-.1083	-.0951	-.1311	-.1394	-.1554	-.1666	-.2782	-.2800	-.3647	-.4451	-.4419	-.4802
110.000	-.1466	-.1430	-.1445	-.1548	-.1440	-.1651	-.1652	-.1764	-.2080	-.2433	-.2946	-.3616	-.3874	-.4163	-.3356
120.000					-.1337							-.2675			
130.000					-.1330							-.2240			
140.000					-.1318							-.2400			
150.000					-.0943							-.2089			
160.000					-.0931							-.1602			
170.000					-.0865							-.1261			
180.000	-.0092	-.0176	-.0255	-.0421	-.0493	-.0612	-.0763	-.0946	-.1087	-.1403	-.1407	-.1309	-.1317	-.1114	-.0669

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI

60.000							.1080		
70.000							.0366	.1353	.0000
80.000							.0028	.0426	.0238
90.000	-.5512	-.2437	-.1437	-.1190	-.1054	.0000	-.0215	.0141	-.0122
100.000	-.4329	-.1703	-.0979	-.0533	-.0682	-.0652			
110.000	-.2649	-.1124	-.0264	-.0003	-.0471	-.1424			
120.000					-.0912				
130.000					-.0265				
140.000					-.1392				
150.000					-.0566				
160.000					-.0612				
170.000					.0617				
180.000	-.3230	.0126	.0442	.1028	.1693	.2137			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACM (3) = .848 ALPHA (4) = 12.730

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI														
90.000	.0570	.0536	-.0341											
95.000	.0410	.0800	-.0235											
98.000	.0106	.0437	-.0143											
99.000			-.0236	-.2559	-.5477	-.3970	-.2205	.0000	-.2357	-.2729	-.2280	-.2062	-.1577	-.1202
100.000						-.3771	-.2649	-.2772	-.3043	-.2763	-.2280	-.2504	-.2133	-.2578
110.000						-.3612	-.3077	-.3631	-.3965	-.3101	-.2784	-.2450	-.2181	-.2395
120.000						-.3061								-.2748
130.000						-.4876								-.1678
140.000						-.5441								-.1313
150.000						-.6192								-.1366
160.000						-.6566								-.1068
170.000						-.6607								-.0794
18.0000						-.6605	-.6521	-.5741	-.5038	-.3494	-.2337	-.1726	-.0928	-.0214

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
90.000	-.1472	-.1379	-.1249	-.1073	-.1037	-.1323	-.1226	.0000	-.1912	-.2842	-.3299	-.4128	-.5195	-.6675
100.000	-.1714	-.1768	-.1561	-.1427	-.1201	-.1590	-.1675	-.1880	-.1895	-.3120	-.3138	-.4006	-.4770	-.4760
110.000	-.1996	-.1801	-.1765	-.1797	-.1767	-.1991	-.1922	-.2095	-.2324	-.2815	-.3394	-.3933	-.4158	-.3806
120.000						-.1672								-.2718
130.000						-.1670								-.2557
140.000						-.1849								-.2890
150.000						-.1256								-.2542
160.000						-.1124								-.1113
170.000						-.0753								-.1666
180.000	-.0124	-.0163	-.0336	-.0480	-.0600	-.0736	-.0968	-.1012	-.1334	-.1419	-.1605	-.1674	-.1632	-.0853

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI									
90.000									
95.000									
98.000									
99.000									
100.000	-.4549	-.1839	-.2583	-.2232	-.2541	.0000			
110.000	-.3400	-.1747	-.1436	-.1341	-.1849	-.2539			
120.000	-.2458	-.1089	-.0523	-.0501	-.1126	-.2352			
130.000						-.1454			
140.000						-.1075			
150.000						-.1903			
160.000						-.1206			
170.000						.0634			
180.000						.0380			
18.0000	-.2647	-.0241	.0178	.0659	.1393				

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

(REC004)

MACH (3) = .649 ALPHA (8) = 16.920

SECTION 111 FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1840	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
60.000	.0000	.0464	-.0478												
70.000	-.0384	.0273	-.0246												
80.000	-.0683	-.0027	-.0314												
90.000		-.0432	-.2190	-.4986	-.3020	-.2976	.0000	-.2847	-.3300	-.3252	-.3066	-.2309	-.1853	-.2833	
100.000					-.4356	-.3078	-.3078	-.3116	-.3739	-.3601	-.3141	-.2782	-.3296	-.2371	
110.000					-.4499	-.3329	-.4101	-.4265	-.5143	-.4617	-.3363	-.3238	-.2994	-.2955	
120.000					-.4933								-.2864		
130.000					-.3098								-.2617		
140.000					-.5923								-.1460		
150.000					-.6237								-.1567		
160.000					-.6699								-.1550		
170.000					-.6653								-.1270		
180.000					-.6744	-.6622	-.6485	-.5520	-.4347	-.3160	-.1937	-.1332	-.0490	-.0464	

X/L	.4900	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6750	.6880	.7100
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PHI															
90.000	-.2091	-.1843	-.2013	-.1805	-.1441	-.1813	-.1748	.0000	-.2619	-.3411	-.4127	-.5111	-.5937	-.6361	.0000
100.000	-.2456	-.2385	-.2325	-.1681	-.1710	-.2005	-.1973	-.2436	-.2287	-.3606	-.3445	-.4534	-.5253	-.5126	-.5343
110.000	-.2747	-.2473	-.2325	-.2353	-.2130	-.2344	-.2392	-.2397	-.2750	-.2996	-.4310	-.4349	-.4317	-.3940	
120.000					-.2178								-.3030		
130.000					-.2431								-.2882		
140.000					-.2801								-.2948		
150.000					-.2024								-.3401		
160.000					-.1519								-.2738		
170.000					-.1020								-.1961		
18.000	-.0287	-.0472	-.0527	-.0572	-.0685	-.0400	-.1154	-.1422	-.1611	-.1817	-.1990	-.2022	-.2175	-.1924	-.0997

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
60.000							-.2560		
70.000							-.5749	-.1994	.0000
80.000							-.4875	-.2946	-.1699
90.000	-.5959	-.4314	-.3564	-.3858	-.4294	.0000	-.4633	-.3193	-.2179
100.000	-.5199	-.3239	-.2397	-.2053	-.2061	-.4131			
110.000	-.3184	-.1740	-.0951	-.0669	-.1481	-.3367			
120.000						-.1452			
130.000						-.1376			
140.000						-.2613			
150.000						-.1743			
160.000						-.0146			
170.000						-.0744			
180.000	-.3312	-.0913	-.0369	-.0161	-.1037	.2167			

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(RECORD)

AMES 66-630 PREC (E VENTING - SHUTTLE ORBITER

MACH (4) = .953 ALPHA (1) = 6.508

SECTION (1) FUSELAGE DEFENDENT VARIABLE CP

X/L .0670 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3100 .3380 .3570 .3750 .3940 .4050 .4310

PHI

80.000 .1242 .1179 .0158
 90.000 .1673 .1387 .0309
 100.000 .1689 .1251 .0545
 110.000 .0449 -.2415 -.5161 -.5141 -.4346 .0000 -.3683 -.4236 -.4116 -.3812 -.2769 -.1202 .0038
 120.000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000
 130.000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000
 140.000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000
 150.000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000
 160.000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000
 170.000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000
 180.000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000

X/L

PHI

90.000 .0146 .0116 .0148 .0258 .0312 .0186 .0456 .0000 .0021 .0021 .0021 .0021 .0021 .0021
 100.000 .0036 .0132 .0039 .0128 .0211 .0023 .0182 .0000 .0012 .0012 .0012 .0012 .0012 .0012
 110.000 .0009 .0066 .0041 .0053 .0046 .0015 .0002 .0000 .0000 .0000 .0000 .0000 .0000 .0000
 120.000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000
 130.000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000
 140.000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000
 150.000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000
 160.000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000
 170.000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000
 180.000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000

X/L

PHI

80.000 .1812
 90.000 .1115 .1873 .0000
 100.000 .0630 .1171 .0795
 110.000 .0220 .0901 .0547
 120.000 .0000 .0000 .0000
 130.000 .0000 .0000 .0000
 140.000 .0000 .0000 .0000
 150.000 .0000 .0000 .0000
 160.000 .0000 .0000 .0000
 170.000 .0000 .0000 .0000
 180.000 .0000 .0000 .0000

MACH (4) = .951 ALPHA (2) = 8.651

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER
(REC004)

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
60.000	.1145	.1224	.0286												
70.000	.1469	.1405	.0460												
80.000	.1360	.1539	.0546												
90.000			.0648	-.2205	-.4945	-.4857	-.4083	.0000	-.3566	-.4176	-.3964	-.4007	-.4177	-.2164	-.3700
100.000						-.4851	-.4783	-.4474	-.3797	-.4316	-.4198	-.3345	-.4781	-.0986	-.2896
110.000						-.5673	-.5198	-.4982	-.4727	-.4334	-.3900	-.4408	-.3743	-.2175	-.0369
120.000						-.6082								-.3267	
130.000						-.8533								-.1811	
140.000						-1.0490								-.1330	
150.000						-.9724								-.0649	
160.000						-.9238								-.0766	
170.000						-.8319								-.0607	
180.000						-.6439	-.5431	-.4347	-.4329	-.3442	-.2668	-.1766	-.0764	-.0393	.0364
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	.0342	-.0267	-.0228	-.0061	.0013	-.0138	.0310	.0000	-.0213	-.0920	-.1452	-.2387	-.3200	-.3763	.0000
100.000	-.0049	-.0597	-.0534	-.0269	-.0093	-.0352	-.0090	-.0213	-.0302	-.1260	-.1457	-.2393	-.3098	-.3337	-.4001
110.000	-.0511	-.0469	-.0451	-.0518	-.0365	-.0612	-.0263	-.0400	-.0567	-.0932	-.1637	-.2357	-.2765	-.3134	-.3595
120.000						-.0401								-.2261	
130.000						-.0313								-.1931	
140.000						-.0375								-.2177	
150.000						.0273								-.2072	
160.000						.0443								-.1521	
170.000						.0574								-.1418	
180.000	.0492	.0499	.0476	.0372	.0329	.0648	.0436	.0262	.0093	-.0297	-.1778	-.1078	-.1124	-.1119	-.0457
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PHI															
60.000							.0932								
70.000							.0241	.1578	.0000						
80.000							.0083	.0856	.0729						
90.000	-.4625	-.4190	-.3509	-.2837	-.1385	.0000		.0445	.0338						
100.000	-.3972	-.3938	-.2270	-.1660	-.1367	-.1460									
110.000	-.3548	-.2670	-.0805	-.0657	-.1541	-.2337									
120.000						-.1294									
130.000						-.0351									
140.000						-.1024									
150.000						-.0362									
160.000						.0783									
170.000						.0404									
180.000	-.3432	.0486	.1239	.1937	.1763	.2260									

AMES 68-630 PRESSURE VENTING - SHUTTLE ORBITER (REC0004)

MACH (4) = .350 ALPHA (3) = 10.760

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.1034	.1082	.0219											
70.000	.1150	.1236	.0394											
80.000	.0935	.1306	.0480											
90.000		.0820	-.1807	-.4788	-.4760	-.3981	.0000	-.3349	-.3674	-.3936	-.3992	-.3873	-.2284	-.0510
100.000				-.4790	-.4790	-.4444	-.3979	-.3778	-.3990	-.3491	-.3168	-.4638	-.2493	-.0775
110.000				-.5554	-.4988	-.4988	-.4950	-.4756	-.5140	-.5282	-.3161	-.2985	-.1683	-.0615
120.000				-.6190									-.2576	
130.000				-.8801									-.1261	
140.000				-1.0900									-.1506	
150.000				-.9927									-.0743	
160.000				-.8279									-.0629	
170.000				-.6904									-.0683	
180.000				-.7203	-.6163	-.5137	-.4698	-.3405	-.2680	-.1654	-.2846	-.0519	.0072	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
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PHI

90.000	-.0766	-.0634	-.0230	-.0081	.0036	-.0165	-.0093	.0000	-.0668	-.1478	-.1898	-.2566	-.3540	-.3905
100.000	-.0310	-.0726	-.0571	-.0225	-.0156	-.0407	-.0462	-.0647	-.0702	-.1841	-.1846	-.2487	-.3296	-.3527
110.000	-.0654	-.0614	-.0674	-.0514	-.0501	-.0715	-.0723	-.0864	-.1099	-.1618	-.2010	-.2607	-.3032	-.3481
120.000						-.0701							-.2680	
130.000						-.0535							-.2404	
140.000						-.0752							-.2304	
150.000						-.0145							-.1907	
160.000						.0092							-.1606	
170.000	.0375	.0565	.0567	.0502	.0429	.0291	.0031	-.0143	-.0166	-.0704	-.0856	-.1157	-.1294	-.1156

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI

60.000							-.0088		
70.000							-.0837	.1076	.0000
80.000							-.1000	.0479	.0619
90.000	-.5144	-.5037	-.4612	-.3647	-.3263	.0000	-.1299	-.0020	.0240
100.000	-.4356	-.4803	-.3181	-.2305	-.2791	-.2019			
110.000	-.4140	-.5125	-.1658	-.1326	-.2173	-.2684			
120.000						-.2527			
130.000						-.0662			
140.000						-.1547			
150.000						-.0494			
160.000						.1026			
170.000						.1035			
180.000	-.4074	-.0422	.0370	.1092	.1898	.2585			

(REC004)

JAMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACH (4)} = .950 \quad \text{ALPHA (5)} = 14.940$$

SECTION (1) FUSELAGE

Y/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
60.000	.0653	.1068	.0472												
70.000	.0515	.1120	.0585												
80.000	.0137	.0921	.0683												
90.000			.0801	-.1186	-.4242	-.4156	-.3446	.0000	-.2917	-.3093	-.3130	-.3415	-.3940	-.2160	-.3916
100.000						-.4125	-.3709	-.3442	-.3143	-.3297	-.3512	-.3958	-.4572	-.4797	-.5844
110.000						-.4860	-.4284	-.4429	-.4143	-.4544	-.4560	-.5566	-.5696	-.3871	-.3767
120.000						-.5620								-.3332	
130.000						-.7061								-.3052	
140.000						-.6506								-.2845	
150.000						-.5816								-.2762	
160.000						-.6094								-.0882	
170.000						-.6323								-.2439	
180.000						-.6031	-.6017	-.6370	-.5938	-.5474	-.4750	-.2171	-.0424	-.0602	-.1260

FMI	.4500	.4600	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
90.000	-.3278	-.0696	-.0467	-.0739	-.0559	-.0766	-.0330	.0000	-.1008	-.1913	-.3532	-.4446	-.4852	.0000
100.000	-.2221	-.1077	-.1068	-.0969	-.0728	-.0962	-.0688	-.0890	-.0976	-.2176	-.2238	-.3218	-.3888	-.5083
110.000	-.1664	-.1126	-.1491	-.1462	-.1320	-.1432	-.1125	-.1155	-.1385	-.1847	-.2455	-.3088	-.3433	-.4566
120.000						-.1144							-.3908	
130.000						-.0839							-.2862	
140.000						-.2176							-.3026	
150.000						-.0229							-.3079	
160.000						.0100							-.2627	
170.000						.0400							-.2217	
180.000	-.0779	-.0354	-.0034	.0245	.0450	.0009	-.0286	-.0368	-.0860	-.1173	-.1516	-.1776	-.1962	-.1882

4/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PHI									
60.000							-.2728		
70.000							-.4096	-.2098	.0000
80.000							-.4180	-.4426	-.0972
90.000	-.6152	-.5688	-.5988	-.4823	-.4671	.0000	-.3503	-.4478	-.1216
100.000	-.9722	-.5681	.4435	-.3265	-.3402	-.3803			
110.000	-.4625	-.4043	-.2490	-.1964	-.2441	-.4258			
120.000						-.2073			
130.000						-.1116			
140.000						-.2011			
150.000						-.1191			
160.000						-.0457			
170.000						-.0418			
180.000	-.4573	-.1169	-.0126	.0329	.1164	.2400			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (4) = .947 ALPHA (6) = 17.000

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0670	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
60.000	.0397	.0885	.0332												
70.000	-.0031	.0872	.0434												
80.000	-.0324	.0595	.0491												
90.000		.0540	-.1242	-.4165	-.3864	-.3305	.0000	-.2756	-.3034	-.3179	-.3350	-.3582	-.3282	-.3686	
100.000				-.4029	-.3613	-.3206	-.3081	-.3373	-.3687	-.3913	-.4346	-.4908	-.3947		
110.000				-.4729	-.4580	-.4268	-.4065	-.4479	-.4675	-.5291	-.5325	-.4333	-.4130		
120.000				-.5534											
130.000				-.6243											
140.000				-.6266											
150.000				-.6051											
160.000				-.6075											
170.000				-.6094											
180.000				-.6112	-.7024	-.6705	-.6131	-.5625	-.4890	-.3972	-.2903	-.2281	-.1291		
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100

PMI

90.000	-.3679	-.4146	-.2979	.0249	-.0490	-.0668	-.0751	.0000	-.1648	-.2657	-.2996	-.3916	-.4962	-.5526	.0000
100.000	-.3591	-.3679	-.0758	-.0390	-.0749	-.0933	-.1014	-.1074	-.1408	-.2767	-.2355	-.3378	-.4149	-.4480	-.5595
110.000	-.3948	-.0929	-.0484	-.0933	-.1322	-.1239	-.1119	-.1362	-.1852	-.2408	-.2558	-.3266	-.3387	-.3882	-.4760
120.000						-.1131									
130.000						-.1536									
140.000						-.1778									
150.000						-.0945									
160.000						-.0607									
170.000						-.0172									
180.000	-.0542	.0855	.0819	.0405	.0281	.0149	-.0163	-.0428	-.0929	-.1341	-.1364	-.1579	-.1878	-.2268	-.1864

X/L

.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI

60.000								
70.000								
80.000								
90.000	-.6939	-.6472	-.6732	-.5263	-.5853	.0000		
100.000	-.6301	-.6003	-.4610	-.3753	-.4391	-.5697		
110.000	-.4803	-.4937	-.2283	-.2383	-.3219	-.5361		
120.000						-.2378		
130.000						-.0958		
140.000						-.2130		
150.000						-.0502		
160.000						.1338		
170.000						-.0542		
180.000	-.4767	-.1793	-.0632	-.0140	.1337	.2049		

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (5) = 1.048 ALPHA (1) = 6.629

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0470	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
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PMI

60.000	.2370	.2356	.1423												
70.000	.2759	.2592	.1586												
80.000	.2750	.2406	.1748												
90.000		.1792		-.0970	-.3426	-.3459	-.2827	.0000	-.2296	-.2760	-.2816	-.3033	-.2908	-.2228	-.2985
100.000						-.3564	-.3418	-.2995	-.2702	-.2789	-.2985	-.2460	-.3395	-.3715	-.2322
110.000						-.4231	-.4020	-.3735	-.3462	-.3691	-.3805	-.3920	-.3534	-.3692	-.2197
120.000							-.4375							-.3657	
130.000							-.6451							-.2038	
140.000							-.7961							-.1824	
150.000							-.7377							-.1661	
160.000							-.6981							-.1513	
170.000							-.6353							-.1331	
180.000							-.5000	-.4243	-.3932	-.3447	-.2879	-.2179	-.1404	-.1157	-.0730

X/L

.4500	.4680	.4860	.5030	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PMI

90.000	-.2023	-.1871	-.1902	-.1376	-.0912	.0241	.0805	.0000	.0757	.0212	-.0081	-.0784	-.1456	-.1881	.0000
100.000	-.2029	-.2043	-.1902	-.1416	-.0875	.0213	.0614	.0631	.0678	-.0048	-.0168	-.0742	-.1345	-.1501	-.2409
110.000	-.2064	-.1898	-.1708	-.1561	-.1084	.0109	.0422	.0526	.0343	.0154	-.0332	-.0792	-.1122	-.1496	-.2157
120.000						-.0014								-.0946	
130.000						-.0140								-.0523	
140.000						-.0081								-.0502	
150.000						.0022								-.0298	
160.000						.0011								-.0027	
170.000						.0135								.0015	
180.000	-.0747	-.0705	-.0506	-.0448	-.0262	.0208	.0414	.0601	.0655	.0566	.0434	.0236	.0118	.0109	.0377

X/L

.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI

60.000						.1899		
70.000						.1232	.0000	
80.000						.0649	.1772	.1911
90.000	-.2937	-.2088	-.2572	-.1797	-.1312	.0000		
100.000	-.2524	-.2555	-.1381	-.0665	-.0851	-.0980		
110.000	-.2239	-.1605	.0081	.0404	-.0150	-.1744		
120.000						-.0248		
130.000						.1309		
140.000						.0782		
150.000						.1341		
160.000						.2282		
170.000						.1903		
180.000	-.2275	.1340	.2191	.2837	.3522	.4286		

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (5) = 1.049 ALPHA (2) = 8.877

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.2334	.2448	.1802											
70.000	.2615	.2653	.1736											
80.000	.2523	.2728	.1886											
90.000			.1948	-.0700	-.3263	-.3236	-.2634	.0000	-.2293	-.2811	-.3065	-.2855	-.2128	-.3503
100.000					-.3219	-.3136	-.2932	-.2834	-.3085	-.3493	-.3410	-.3921	-.3573	
110.000					-.3923	-.3851	-.3672	-.3498	-.3778	-.3964	-.4045	-.4132	-.3739	-.2890
120.000					-.4321								-.3663	
130.000					-.6534								-.2207	
140.000					-.8287								-.1886	
150.000					-.7742								-.1663	
160.000					-.7259								-.1422	
170.000					-.6574								-.1242	
180.000					-.5189	-.4573	-.4224	-.3878	-.3652	-.2896	-.1975	-.1255	-.1050	-.0702
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.3159	-.2589	-.2488	-.2047	-.1496	.0212	.1139	.0900	.0837	.0137	-.0345	-.1131	-.2205	.0000
100.000	-.2803	-.2614	-.2442	-.2076	-.1683	.0194	.0839	.0734	.0717	-.0151	-.0343	-.1076	-.1873	-.2738
110.000	-.2573	-.2337	-.2123	-.2039	-.1728	.0198	.0511	.0469	.0301	-.0064	-.0681	-.1139	-.1883	-.2533
120.000					-.0246								-.1307	
130.000					-.0514								-.0902	
140.000					.0032								-.0990	
150.000					.0128								-.0706	
160.000					.0057								-.0408	
170.000					.0218								-.0244	
180.000	-.0718	-.0736	-.0471	-.0515	-.0293	.0303	.0879	.0868	.0736	.0642	.0439	.0027	-.0116	.0212
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000							.0817							
70.000							.0161	.2037	.0000					
80.000							-.0171	.1285	.1768					
90.000	-.3367	-.3018	-.2878	-.2209	-.1845	.0000	-.0636	.0835	.1450					
100.000	-.2773	-.3110	-.1690	-.0894	-.1214	-.1447								
110.000	-.2527	-.2150	-.0214	.0172	-.0644	-.2125								
120.000					-.0339									
130.000					.1075									
140.000					.0500									
150.000					.1029									
160.000					.2577									
170.000					.1883									
180.000	-.2518	-.1022	-.2067	.2793	.3560	.4349								

WFFS 04-037 PRESSURE VENTING - SHUTTLE ORBITER

MACH (3) = 1.243 ALPHA (3) = 10.750

DEPENDENT VARIABLE : CP

SECTION (1) FUSELAGE

[illegible][illegible]

X/L	.4500	.4600	.4000	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6800	.7100
PMT															
90.000	-.3401	-.3493	-.3581	-.2662	-.2290	-.0171	.1233	.0020	.0830	.0076	-.0558	-.1301	-.2208	-.2554	.0000
100.000	-.3696	-.3997	-.3103	-.2554	-.2194	-.0105	.1018	.0822	.0709	-.0278	-.0566	-.1286	-.1978	-.2214	-.3153
110.000	-.3662	-.2955	-.2624	-.2279	.0338	.0663	.0525	.0262	-.0197	-.0879	-.1436	-.1778	-.2202	-.2684	-.2884
120.000					-.0030									-.1491	
130.000					-.0962									-.1115	
140.000					-.0130									-.1242	
150.000					.0154									-.1056	
160.000					.0496									-.0566	
170.000					.0655									-.0326	
									.0812	.0647	.0411	.0089	-.0176	-.0176	-.0024

#/L	.7290	.7470	.7670	.7850	.8030	.8230	.8620	.9000	.9400
PMI									
60.000							-.0391		
70.000							-.1191	.1193	.0000
80.000							-.1324	.0407	.1513
90.000	-.3612	-.3657	-.3903	-.2644	-.2261	.0000	-.1311	.0027	.1212
100.000	-.3203	-.3663	-.2741	-.1249	-.1638	-.2164			
110.000	-.3001	-.2431	-.0877	-.0266	-.0998	-.2567			
120.000						-.0633			
130.000						.0679			
140.000						.0227			
150.000						.0664			
160.000						.2617			
170.000						.1918			
180.000	-.2931	-.0402	-.1815	-.2660	-.3548	-.4246			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (S) = 1.048 ALPHA (S) = 14.930

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2840 .3300 .3370 .3750 .3940 .4030 .4310

PHI

80.000 .1721 .2122 .1566
 90.000 .1531 .2181 .1694
 80.000 .1239 .1723 .1766
 90.000 .1936 .0007 .2730 .2843 .2333 .0000 .1976 .2203 .2432 .2649 .2738 .2056 .3482
 100.000 .1001 .0000 .0000 .2368 .2301 .2463 .2835 .3187 .3331 .3640 .3636
 110.000 .3348 .3331 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362
 120.000 .4309 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362
 130.000 .6819 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362
 140.000 .9112 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362
 150.000 .8841 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362
 160.000 .8193 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362
 170.000 .7250 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362
 180.000 .5964 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362 .3362

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5980 .6170 .6360 .6540 .6730 .6880 .7100
 PHI
 90.000 .3283 .3408 .3620 .3458 .3002 .0178 .1517 .0000 .0674 .0484 .0802 .1898 .2761 .3258 .0000
 100.000 .3633 .4189 .4125 .3416 .2212 .0221 .1337 .1067 .0645 .0753 .0689 .1698 .2346 .2673 .3536
 110.000 .4417 .3816 .3362 .2626 .1552 .0399 .0933 .0699 .0099 .0501 .0916 .1672 .1995 .2403 .3098
 120.000 .0149 .1164 .0652 .0938 .1034 .1192 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278
 130.000 .1164 .0652 .0938 .1034 .1192 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278
 140.000 .0652 .0938 .1034 .1192 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278
 150.000 .0938 .1034 .1192 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278
 160.000 .1034 .1192 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278
 170.000 .1192 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278
 180.000 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278 .1278

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400
 PHI
 80.000 .2011 .1980 .2774 .0000
 90.000 .2231 .3614 .0148
 80.000 .4583 .4415 .5131 .4256 .3569 .0000
 90.000 .3741 .4246 .4040 .2422 .2495 .3333
 100.000 .3299 .3412 .2062 .1002 .1469 .3323
 110.000 .1085 .0278 .1406 .0812 .2775 .2643
 120.000 .3314 .1110 .1413 .3562 .4509

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(FEC 024)

$$\text{MACM} (6) = 1.095 \quad \text{ALPHA} (1) = 6.597$$

DEFINITION OF THE DEPENDENT VARIABLE CP

[illegible]

AMES 60-630 PRESSURE VENTING - SHUTTLE ORBITER

(REF. 4)

MACH (0) = 1.099 ALPHA (2) = 0.695

SECTION (1) FUSELAGE DEFENDENT VARIABLE CP

X/L .0070 .1200 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PMI

60.0000 .2708 .9741 .2021
 70.0000 .2976 .2974 .2134
 80.0000 .2024 .3008 .2201
 90.0000 .2303 .-0.0346 .-0.2789 .-0.2742 .-0.1931 .0000 .-0.1437 .-0.1993 .-0.1998 .-0.2226 .-0.2123 .-0.1396 .-0.2781
 100.0000 .-0.2726 .-0.2384 .-0.2097 .-0.1650 .-0.2149 .-0.2145 .-0.2645 .-0.2672 .-0.3182 .-0.2648
 110.0000 .-0.3370 .-0.3012 .-0.2735 .-0.2664 .-0.3044 .-0.3044 .-0.3180 .-0.3349 .-0.3248 .-0.1841
 120.0000 .-0.3640
 130.0000 .-0.5019
 140.0000 .-0.7115
 150.0000 .-0.6863
 160.0000 .-0.6427
 170.0000 .-0.5763
 180.0000 .-0.4588 .-0.3255 .-0.3137 .-0.2710 .-0.2034 .-0.1192 .-0.0453 .-0.0252 .0193

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6680 .7100

PMI

60.0000 .-0.2131 .-0.1409 .-0.1254 .-0.0398 .0908 .1662 .1623 .0900 .1541 .0828 .0492 .-0.0132 .-0.1023 .-0.1334 .0020
 70.0000 .-0.1825 .-0.1425 .-0.1191 .-0.0336 .0390 .1686 .1605 .1589 .1421 .0448 .0462 .-0.0138 .-0.0849 .-0.0919 .-0.1994
 80.0000 .-0.1301 .-0.1167 .-0.0899 .-0.0430 .0331 .1384 .1374 .1326 .1003 .0567 .0227 .-0.0308 .-0.0390 .-0.0939 .-0.1758
 90.0000 .1153
 100.0000 .0727
 110.0000 .1247
 120.0000 .1423
 130.0000 .1502
 140.0000 .1587
 150.0000 .1611 .1491 .1461 .1461 .1714 .1694 .1601 .13 .1281 .0901 .0826 .0575 .0783

X/L

.7240 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

60.0000 .1467
 70.0000 .0880 .2629 .0000
 80.0000 .0448 .1915 .2437
 90.0000 .-0.0011 .1453 .2038
 100.0000 .-0.0020
 110.0000 .-0.2511 .-0.2430 .-0.1109 .-0.0208 .-0.0519 .-0.0937
 120.0000 .-0.1932 .-0.3726 .0347 .0021 .0230 .-0.1219 .0452
 130.0000 .1753
 140.0000 .1177
 150.0000 .1740
 160.0000 .2113
 170.0000 .2490
 180.0000 .4114 .4962

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OA63

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD04)

MACH (0) = 1.100 ALPHA (5) = 14.930

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .2444 .2876 .2329

70.000 .2289 .2666 .2400

80.000 .2019 .2426 .2493

90.000 .2645 .0672 -.1844

100.000 .1895 -.1389 .0000

110.000 -.1949 -.1652 -.1413

120.000 -.2587 -.2375 -.2359

130.000 -.3333

140.000 -.5770

150.000 -.7975

160.000 -.7706

170.000 -.7071

180.000 -.6197

X/L .4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.2204 -.2397 -.2741

100.000 -.2796 -.3145 -.2826

110.000 -.3220 -.2962 -.1864

120.000 .0829 .1189 .1545

130.000 .0829 .1189 .1545

140.000 .0829 .1189 .1545

150.000 .0829 .1189 .1545

160.000 .0829 .1189 .1545

170.000 .0829 .1189 .1545

180.000 .0829 .1189 .1545

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 -.1093

70.000 -.1432

80.000 -.2663

90.000 -.3041

100.000 -.3534

110.000 -.3455

120.000 -.2938

130.000 -.2730

140.000 -.2594

150.000 -.2594

160.000 -.2594

170.000 -.2594

180.000 -.2594

X/L .1378 .1990 .3526 .4099 .5105

$$\text{MACH}(\theta) = 1.099 \quad \text{ALPHA}(\theta) = 17.060$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

[illegible][illegible]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100																																																																																																																																												
X/L	.4500	.4600	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6920	.7110	.7300	.7490	.7680	.7870	.8060	.8250	.8440	.8630	.8820	.9010	.9200	.9390	.9580	.9770	.9960	1.0150	1.0340	1.0530	1.0720	1.0910	1.1100	1.1290	1.1480	1.1670	1.1860	1.2050	1.2240	1.2430	1.2620	1.2810	1.3000	1.3190	1.3380	1.3570	1.3760	1.3950	1.4140	1.4330	1.4520	1.4710	1.4900	1.5090	1.5280	1.5470	1.5660	1.5850	1.6040	1.6230	1.6420	1.6610	1.6800	1.6990	1.7180	1.7370	1.7560	1.7750	1.7940	1.8130	1.8320	1.8510	1.8700	1.8890	1.9080	1.9270	1.9460	1.9650	1.9840	2.0030	2.0220	2.0410	2.0600	2.0790	2.0980	2.1170	2.1360	2.1550	2.1740	2.1930	2.2120	2.2310	2.2500	2.2690	2.2880	2.3070	2.3260	2.3450	2.3640	2.3830	2.4020	2.4210	2.4400	2.4590	2.4780	2.4970	2.5160	2.5350	2.5540	2.5730	2.5920	2.6110	2.6300	2.6490	2.6680	2.6870	2.7060	2.7250	2.7440	2.7630	2.7820	2.8010	2.8200	2.8390	2.8580	2.8770	2.8960	2.9150	2.9340	2.9530	2.9720	2.9910	3.0100	3.0290	3.0480	3.0670	3.0860	3.1050	3.1240	3.1430	3.1620	3.1810	3.2000	3.2190	3.2380	3.2570	3.2760	3.2950	3.3140	3.3330	3.3520	3.3710	3.3900	3.4090	3.4280	3.4470	3.4660	3.4850	3.5040	3.5230	3.5420	3.5610	3.5800	3.5990	3.6180	3.6370	3.6560	3.6750	3.6940	3.7130	3.7320	3.7510	3.7700	3.7890	3.8080	3.8270	3.8460	3.8650	3.8840	3.9030	3.9220	3.9410	3.9600	3.9790	3.9980	4.0170	4.0360	4.0550	4.0740	4.0930	4.1120	4.1310	4.1500	4.1690	4.1880	4.2070	4.2260	4.2450	4.2640	4.2830	4.3020	4.3210	4.3400	4.3590	4.3780	4.3970	4.4160	4.4350	4.4540	4.4730	4.4920	4.5110	4.5300	4.5490	4.5680	4.5870	4.6060	4.6250	4.6440	4.6630	4.6820	4.7010	4.7200	4.7390	4.7580	4.7770	4.7960	4.8150	4.8340	4.8530	4.8720	4.8910	4.9100	4.9290	4.9480	4.9670	4.9860	5.0050	5.0240	5.0430	5.0620	5.0810	5.1000	5.1190	5.1380	5.1570	5.1760	5.1950

[illegible]

Y/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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[illegible]

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0A63

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AMES 86-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC004)

MACH (7) = 1.150 ALPHA (1) = 6.602

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3370	.3750	.3940	.4090	.4310
PHI															
60.000	.2640	.2631	.2112												
70.000	.3046	.3066	.2297												
80.000	.3009	.2932	.2506												
90.000		.2621	-.0022	-.2336	-.2525	-.1990	.0000	-.1556	-.2014	-.2000	-.2187	-.2049	-.1814	-.2445	
100.000					-.2542	-.2510	-.2160	-.1904	-.2028	-.2177	-.2606	-.2519	-.2860	-.2157	
110.000					-.3104	-.3012	-.2862	-.2618	-.2848	-.2937	-.2987	-.2913	-.3165	-.1949	
120.000					-.3141								-.3345		
130.000					-.5068								-.1644		
140.000					-.6482								-.1540		
150.000					-.5960								-.1444		
160.000					-.5574								-.1382		
170.000					-.5161								-.1247		
180.000					-.4232	-.3019	-.2795	-.2726	-.2384	-.2065	-.1437	-.1129	-.0597		

X/L

X/L	.4500	.4660	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1942	-.1584	-.1596	-.1271	-.1114	-.0981	-.0614	.0000	.0611	.0613	.0081	-.0293	-.0929	-.1157	.0000
100.000	-.1756	-.1666	-.1537	-.1353	-.1175	-.1055	-.0877	-.0356	.0448	.0369	.0083	-.0315	-.0823	-.0863	-.1709
110.000	-.1666	-.1512	-.1402	-.1469	-.1324	-.1147	-.0924	-.0465	.0093	.0391	-.0130	-.0325	-.0682	-.0954	-.1551
120.000						-.0907								-.0605	
130.000						-.0847								-.0140	
140.000						-.0754								-.0068	
150.000						-.0481								.0075	
160.000						-.0456								.0294	
170.000						-.0326								.0360	
180.000	-.0533	-.0531	-.0273	-.0382	-.0300	-.0301	-.0348	-.0285	-.0183	.0001	-.0270	.0376	.0423	.0453	.0863

X/L

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PHI									
60.000							.2199		
70.000							.1522	.3187	.0000
80.000							.1079	.2495	.2981
90.000	-.2012	-.0713	-.1192	-.1415	-.1116	.0000	.0432	.1939	.2662
100.000	-.2259	-.2146	-.1668	-.0231	-.0409	-.0969			
110.000	-.1701	-.1575	.0454	.0743	.0312	-.0392			
120.000						.0867			
130.000						.2313			
140.000						.1892			
150.000						.2258			
160.000						.3036			
170.000						.2428			
180.000	-.1664	.0649	.2586	.5255	.3971	.4990			

(RECORD)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (7) = 1.151 ALPHA (2) = 8.667

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .2507 .2794 .2214
 70.000 .2729 .3058 .2408
 80.000 .2633 .3197 .2576
 90.000 .2745 .0185 .2245 .2386 .1808 .0000 .1456 .1934 .1986 .2143 .2026 .1752 .2626
 100.000 .2400 .2302 .2021 .1810 .1948 .2155 .2582 .2532 .2966 .2741
 110.000 .2953 .2818 .2688 .2529 .2802 .2965 .3067 .3190 .3083 .3101
 120.000 .3165 .2953 .2818 .2688 .2529 .2802 .2965 .3067 .3190 .3083 .3101
 130.000 .5186 .2953 .2818 .2688 .2529 .2802 .2965 .3067 .3190 .3083 .3101
 140.000 .6805 .2953 .2818 .2688 .2529 .2802 .2965 .3067 .3190 .3083 .3101
 150.000 .6304 .2953 .2818 .2688 .2529 .2802 .2965 .3067 .3190 .3083 .3101
 160.000 .5856 .2953 .2818 .2688 .2529 .2802 .2965 .3067 .3190 .3083 .3101
 170.000 .5416 .2953 .2818 .2688 .2529 .2802 .2965 .3067 .3190 .3083 .3101
 180.000 .4431 .2953 .2818 .2688 .2529 .2802 .2965 .3067 .3190 .3083 .3101

X/L .4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 .2391 .2428 .2325 .2136 .1527 .1494 .1169 .0000 .0065 .0410 .0218 .0185 .1013 .0000
 100.000 .2784 .2421 .1887 .1672 .1582 .1648 .1387 .0925 .0176 .0107 .0236 .0197 .0925 .1978
 110.000 .2264 .1928 .1736 .1826 .1736 .1713 .1443 .1111 .0502 .0093 .0052 .0084 .1263 .1830
 120.000 .1267 .1427 .1427 .1427 .1427 .1427 .1427 .1427 .1427 .1427 .1427 .1427 .1427 .1427
 130.000 .1427 .1427 .1427 .1427 .1427 .1427 .1427 .1427 .1427 .1427 .1427 .1427 .1427 .1427
 140.000 .0921 .0921 .0921 .0921 .0921 .0921 .0921 .0921 .0921 .0921 .0921 .0921 .0921 .0921
 150.000 .0647 .0647 .0647 .0647 .0647 .0647 .0647 .0647 .0647 .0647 .0647 .0647 .0647 .0647
 160.000 .0585 .0585 .0585 .0585 .0585 .0585 .0585 .0585 .0585 .0585 .0585 .0585 .0585 .0585
 170.000 .0409 .0409 .0409 .0409 .0409 .0409 .0409 .0409 .0409 .0409 .0409 .0409 .0409 .0409
 180.000 .0349 .0349 .0349 .0349 .0349 .0349 .0349 .0349 .0349 .0349 .0349 .0349 .0349 .0349

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 .1159 .0887 .2743 .0000
 70.000 .0911 .1908 .2747
 80.000 .0212 .1334 .2489
 90.000 .0000 .0000 .0000
 100.000 .1329 .1329 .1329
 110.000 .0641 .0641 .0641
 120.000 .0863 .0863 .0863
 130.000 .2150 .2150 .2150
 140.000 .1702 .1702 .1702
 150.000 .2048 .2048 .2048
 160.000 .3370 .3370 .3370
 170.000 .2485 .2485 .2485
 180.000 .5385 .5385 .5385

DATE 24 MAR 74

TABULATED SOURCE DATA -- 1A29/OA63

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AMES 69-030 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (7) = 1.149 ALPHA (3) = 10.760

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
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PHI

90.000	.2254	.2747	.2254												
70.000	.2426	.2926	.2436												
60.000	.2319	.3066	.2623												
90.000		.2840	.0340	-.2150	-.2267	-.1719	.0000	-.1383	-.1685	-.1944	-.2088	-.2006	-.1705	-.2347	
100.000					-.2308	-.2164	-.1912	-.1731	-.1897	-.2101	-.2386	-.2058	-.3019	-.2758	
110.000					-.2794	-.2660	-.2564	-.2458	-.2773	-.2983	-.3132	-.3273	-.3060	-.3442	
120.000						-.3172							-.3142		
130.000						-.5281							-.2351		
140.000						-.7074							-.1987		
150.000						-.6669							-.1738		
160.000						-.6131							-.1501		
170.000						-.5684							-.1294		
180.000						-.4598	-.3696	-.3485	-.3162	-.3064	-.2538	-.1910	-.1282	-.1076	-.0679

X/L

.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PHI

90.000	-.2366	-.2547	-.2666	-.2694	-.2299	-.2033	-.1700	.0000	-.0934	-.0121	-.0223	-.0969	-.0092	-.1357	.0000
100.000	-.2855	-.2963	-.3136	-.2355	-.2064	-.2036	-.1851	-.1569	-.0867	-.0444	-.0088	-.0793	-.0769	-.1099	-.2024
110.000	-.3590	-.3159	-.2375	-.2275	-.2175	-.2156	-.1805	-.1590	-.1163	-.0451	-.0300	-.0819	-.0745	-.1259	-.1935
120.000						-.1624								-.0813	
130.000						-.2302								-.0614	
140.000						-.1032								-.0940	
150.000						-.0903								-.0332	
160.000						-.0702								.0071	
170.000						-.0467								.0339	
180.000	-.0528	-.0536	-.0317	-.0391	-.0369	-.0386	-.0495	-.0511	-.0543	-.0430	-.0098	.0265	.0544	.0518	.0854

X/L

.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI

90.000						.0401		
70.000						.0040	.1957	.0000
60.000						.0135	.1192	.2351
90.000	-.2443	-.2415	-.2953	-.1472	-.1644	.0000	.0042	.0633
100.000	-.2257	-.2696	-.1692	-.0369	-.0832	-.1458		.2107
110.000	-.2095	-.1996	-.0209	.0429	-.0130	-.1508		
120.000						.0655		
130.000						.2144		
140.000						.1668		
150.000						.1798		
160.000						.3725		
170.000						.3026		
180.000	-.2111	.1145	.2780	.3707	.4516	.5376		

$$\text{MACH} (7) = 1.151 \quad \text{ALPHA} (4) = 12.030$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CF

DEPENDENT VARIABLE CF

SECTION (1) FUSELAGE	DEPENDENT VARIABLE CP
1.00	.3750
1.02	.3940
1.03	.4030

III

[illegible]

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[illegible]

THE

[illegible]

JAMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC'D)

$\text{MACM} (P) = 1.153 \quad \text{ALPHA} (5) = 14.950$

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2620	.3010	.3190	.3380	.3370	.3730	.3940	.4030	.4310
PMI															
60,000	.1440	.2331	.2148												
70,000	.1140	.2433	.2313												
80,000	.0734	.2459	.2471												
90,000		.2685	.0733	-.1912	-.2020	-.1444	.0000	-.1188	-.1349	-.1575	-.1742	-.1889	-.1676	-.2522	
100,000					-.2002	-.1829	-.1681	-.1469	-.1614	-.1921	-.2237	-.2406	-.2682	-.2725	
110,000					-.2534	-.2316	-.2322	-.2188	-.2583	-.2879	-.3084	-.3277	-.2814	-.3545	
120,000					-.3184								-.2934		
130,000					-.3368								-.4092		
140,000					-.7482								-.3404		
150,000					-.7262								-.2238		
160,000					-.5637								-.1682		
170,000					-.6069								-.1313		
180,000					-.4891	-.4617	-.3698	-.3388	-.3101	-.2396	-.1760	-.1234	-.1057	-.0701	

4/L	.4300	.4680	.4660	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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[illegible]

/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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[illegible]

$$\text{MACH } (7) = 1.131 \quad \text{ALPHA } (8) = 17.125$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

[illegible]

JAMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

(REC'D)

$$\text{MACH} (8) = 1.294 \quad \text{ALPHA} (1) = 6.597$$

SECTION (1) FUSELAGE

[illegible]

JAMES 66-630 FRESSURE VENTING - SHUTTLE ORBITER

(MEC 034)

MACH (0) = 1.250 ALPHA (2) = 0.639

SECTION () FUSE, AGE

DEPENDENT VARIABLE CP

X/L	.0370	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PW1															
60,000	-1909	-2060	.2176												
70,000	-2034	-2214	.2516												
80,000	-1757	-2363	.2684												
90,000		.3096	.0756	-1630		-1943	-1437	.0000	-11089	-1441	-1530	-1588	-1475	-1615	-2102
100,000					-1928	-1082	-1613	-1444	-1567	-1704	-2008	-1922	-2347	-2199	
110,000					-2320	-2275	-2226	-2090	-2313	-2421	-2460	-2539	-2559	-2560	-2726
120,000					-2473								-2847		
130,000					-4330								-1833		
140,000					-5823								-1618		
150,000					-5396								-1641		
160,000					-4957								-1607		
170,000					-4726								-1475		
180,000					-4152	-2987	-2805	-2629	-2548	-2311	-2104	-1618	-1407	-0790	
X/L	.4300	.4680	.4860	.5030	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
FH1															
90,000	-1075	-1090	-1072	-1694	-1148	-1368	-1243	.0000	-0637	-0278	-0136	-0751	-1179	-1049	.0000
100,000	-2255	-2315	-2074	-1522	-1374	-1440	-1429	-1228	-0708	-0607	-0113	-0623	-1007	-0873	-1530
110,000	-2365	-2123	-1590	-1607	-1526	-1541	-1429	-1276	-0962	-0656	-0384	-0677	-0996	-1011	-1407
120,000						-1123							-0736		
130,000						-1234							-0566		
140,000						-0718							-0816		
150,000						-0414							-0266		
160,000						-0310							-0128		
170,000						-0184							.0017		
180,000	-0592	-0404	-0171	-0163	-0191	-0125	-0194	-0247	-0306	-0308	-0111	-0078	.0069	.0153	.0626
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
FH2															
60,000							.0859								
70,000							.0104	.2090	.0000						
80,000							-0697	.1092	.2459						
90,000	-1711	-0239	-2145	-1186	-1278	.0000	-1301	.0305	.2234						
100,000	-1949	-2061	-1846	-0224	-0559	-0948									
110,000	-1533	-1479	.0080	.0613	.0346	-0763									
120,000						.1431									
130,000						.2610									
140,000						.1819									
150,000						.2056									
160,000						.3570									
170,000						.2739									
180,000	-1149	-0024	.2253	.3010	.4210	.5893									

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(REC004)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (0) = 1.230 ALPHA (3) = 10.710

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
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PMI

60.000	-.1750	.1932	.1984											
70.000	-.1756	.1963	.2302											
80.000	-.1419	.1904	.2811											
90.000		.3116	.0951	-.1476	-.1701	-.1260	.0000	-.0984	-.1432	-.1423	-.1514	-.1403	-.1459	-.1553
100.000					-.1609	-.1695	-.1355	-.1215	-.1455	-.1546	-.1915	-.1830	-.2276	-.2045
110.000					-.2114	-.2114	-.2032	-.1698	-.2254	-.2363	-.2495	-.2527	-.2417	-.2696
120.000						-.2385							-.2613	
130.000						-.4290							-.2180	
140.000						-.5975							-.1898	
150.000						-.5634							-.1636	
160.000						-.5142							-.1471	
170.000						-.4890							-.1356	
180.000						-.4182	-.3151	-.2975	-.2766	-.2322	-.1937	-.1459	-.1183	-.0660

X/L

.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
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PMI

90.000	-.1578	-.1840	-.2086	-.1977	-.2039	-.2135	-.1736	.0000	-.1115	-.0961	-.1125	-.1669	-.1562	.0000
100.000	-.2144	-.2359	-.2414	-.2309	-.2216	-.1928	-.1742	-.1591	-.1075	-.1209	-.0569	-.1434	-.1128	-.1687
110.000	-.2792	-.2764	-.2674	-.2423	-.2011	-.2021	-.1708	-.1522	-.1265	-.1022	-.0810	-.0861	-.1220	-.1582
120.000						-.1497							-.1002	
130.000						-.2027							-.0941	
140.000						-.0680							-.1289	
150.000						-.0613							-.0632	
160.000						-.0349							-.0342	
170.000						-.0185							-.0130	
180.000	-.0470	-.0270	-.0023	-.0176	-.0071	-.0097	-.0172	-.0206	-.0305	-.0340	-.0219	-.0242	-.0120	-.0589

X/L

.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI

60.000						-.0056		
70.000						-.0984	.0911	.0000
80.000						-.1337	-.0088	.1993
90.000	-.2023	-.2033	-.2703	-.2213	-.1320	-.1609	-.0719	.1749
100.000	-.2014	-.2323	-.2469	-.0641	-.0480			
110.000	-.1756	-.1956	-.0784	.0273	.0085			
120.000						.1301		
130.000						.2287		
140.000						.1709		
150.000						.1687		
160.000						.4019		
170.000						.3052		
180.000	-.1736	.0117	.2133	.2215	.4521			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC004)

MACH (8) = 1.247 ALPHA (4) = 12.820

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0070	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
60.000	.1596	.1713	.1497												
70.000	.1322	.1872	.1883												
80.000	.0990	.1566	.2314												
90.000		.2916	.1024	-.1434	-.1637	-.1203	.0000	-.0956	-.1408	-.1395	-.1484	-.1324	-.1324	-.1667	
100.000					-.1683	-.1556	-.1359	-.1216	-.1349	-.1530	-.1997	-.1831	-.2252	-.2166	
110.000					-.2634	-.1942	-.1911	-.1814	-.2145	-.2342	-.2373	-.2551	-.2418	-.2854	
120.000					-.2438									-.2569	
130.000					-.4341									-.2862	
140.000					-.6214									-.2202	
150.000					-.5923									-.1875	
160.000					-.5404									-.1579	
170.000					-.5113									-.1399	
180.000					-.4195	-.3299	-.3132	-.2843	-.2669	-.2312	-.1647	.1271	-.1229	-.0761	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
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PMI

90.000	-.1739	-.1767	-.2103	-.2018	-.2069	-.2284	-.2313	.0000	-.1999	-.1600	-.1104	-.1374	-.1989	-.1995	.0000
100.000	-.2232	-.2258	-.2405	-.2354	-.2413	-.2658	-.2667	-.2251	-.1608	-.1711	-.1006	-.1236	-.1700	-.1753	-.1849
110.000	-.2693	-.2692	-.2666	-.3005	-.2817	-.2652	-.2271	-.1983	-.1730	-.1466	-.1244	-.1263	-.1510	-.1780	-.1645
120.000						-.1560								-.1148	
130.000						-.3052								-.1116	
140.000						-.1152								-.1757	
150.000						-.0851								-.1033	
160.000						-.0503								-.0547	
170.000						-.0313								-.0359	
180.000	-.0351	-.0492	-.0169	-.0212	-.0178	-.0194	-.0311	-.0405	-.0522	-.0495	-.0436	-.0305	-.0177	-.0383	

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI

60.000							-.0662		
70.000							-.1872	-.067	.0000
80.000							-.2000	-.0931	.0520
90.000	-.2514	-.2062	-.3252	-.3127	-.2763	.0000	-.2261	-.1140	-.1000
100.000	-.2552	-.2943	-.3256	-.3151	-.0544	-.1247			
110.000	-.1628	-.2760	-.1378	-.0111	-.0225	-.1106			
120.000						.0930			
130.000						.1836			
140.000						.1090			
150.000						.6008			
160.000						.3696			
170.000						.2930			
180.000	-.1904	-.0860	.1171	.3403	.4562	.6214			

$$\text{MACH} (8) = 1.249 \quad \text{ALPHA} (5) = 14.930$$

AMES 66-637 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

SECTION (1) FUSELAGE

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.2620	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
PMI															
60.000	.1499	.1646	.1312												
70.000	.0995	.1370	.1464												
80.000	.0696	.1263	.1620												
90.000		.2311	.1266	.1223	.1416	.1094	.0000	.0861	.1041	.1172	.1266	.1342	.1334	.1658	
100.000					.1446	.1374	.1253	.1060	.1242	.1469	.1849	.1864	.1929	.2010	
110.000					.1806	.1760	.1794	.1664	.2050	.2216	.2432	.2355	.2162	.2656	
120.000					.2321							.2325			
130.000					.4260									.3481	
140.000					.6226									.5027	
150.000					.6036									.1982	
160.000					.5535									.1658	
170.000					.5166									.1172	
180.000					.4137	.3425	.3189	.2867	.2687	.2265	.1784	.1251	.1163	.1070	
X/L	.4900	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	.1190	.1624	.2063	.2036	.2159	.2356	.2259	.0000	.2190	.2173	.1497	.1587	.2091	.2245	.0000
100.000	.2060	.2443	.2481	.2426	.2464	.2706	.2660	.2743	.2200	.2183	.1306	.1419	.1632	.1699	.2148
110.000	.2842	.2696	.2940	.3117	.3053	.3198	.2920	.2611	.2047	.1724	.1426	.1422	.1315	.1671	.1969
120.000						.2513								.1067	
130.000						.3073								.1128	
140.000						.2391								.1938	
150.000						.0879								.1184	
160.000						.0674								.0762	
170.000						.0437								.0466	
180.000	.0563	.0467	.0164	.0296	.0301	.0242	.0422	.0498	.0638	.0628	.0590	.0780	.0406	.0332	.0045
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						

- .1371

- .2791 - .1889 .0000

- .3356 - .1419 - .1484

- .2761 -.2075 -.1478

AMES 86-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD4)

MACH (6) = 1.250 ALPHA (6) = 17.000

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2810	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.1364	.1432	.1121											
70.000	.0579	.1242	.1180											
80.000	.0214	.0757	.1242											
90.000		.1660	.1214	.1070	.1280	.1020	.0000	.0519	.0693	.0897	.1211	.1108	.1125	.1651
100.000					.1267	.1323	.1100	.0780	.0984	.1253	.1514	.1685	.1997	.1847
110.000					.1731	.1696	.1499	.1463	.1840	.2120	.2197	.2395	.2080	.2511
120.000					.2252								.2193	
130.000					.4186								.4642	
140.000					.6212								.4092	
150.000					.6115								.2549	
160.000					.5655								.1718	
170.000					.3255								.1253	
180.000					.4094	.3543	.3172	.2824	.2548	.2074	.1426	.1161	.1046	.0390
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	.1321	.1632	.2150	.2121	.2264	.2515	.2314	.0000	.2218	.2195	.1549	.1801	.1944	.2456
100.000	.2076	.2453	.2545	.2566	.2598	.2859	.2654	.2738	.2274	.2298	.1256	.0970	.1363	.0000
110.000	.2846	.2921	.3044	.3211	.3258	.3501	.3132	.2897	.2298	.1945	.1214	.1004	.1249	.2376
120.000					.2487								.1572	.2049
130.000					.2926								.1127	
140.000					.3488								.0874	
150.000					.1262								.1321	
160.000					.1160								.1570	
170.000					.1391								.0592	
180.000	.0429	.0406	.0150	.0333	.0472	.0324	.0700	.0818	.0883	.0922	.0735	.0609	.0102	.0211
X/L	.7230	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000														
70.000														
80.000														
90.000	.3368	.3137	.4666	.4448	.3375	.0000								
100.000	.3653	.4090	.4366	.2428	.2015	.2515								
110.000	.2650	.3481	.2125	.0592	.0965	.2148								
120.000					.0428									
130.000					.1263									
140.000					.0356									
150.000					.1736									
160.000					.3921									
170.000					.2872									
180.000	.2335	.1541	.0510	.3042	.4610	.6911								

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (9) = 1.403 ALPHA (1) = 0.411

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.1843	.1733	.1311											
70.000	.2011	.1722	.1245											
80.000	.1643	.1639	.1963											
90.000		.2597	.1119	-.1132	-.1476	-.1311	.0000	-.1003	-.1323	-.1245	-.1380	-.1216	-.1564	-.1595
100.000					-.1455	-.1584	-.1456	-.1276	-.1354	-.1418	-.1671	-.1646	-.1972	-.1727
110.000					-.1826	-.1823	-.1932	-.1821	-.1932	-.1999	-.2018	-.2141	-.2032	-.1831
120.000					-.1762								-.2163	
130.000					-.3279								-.715	
140.000					-.4355								-.1662	
150.000					-.3965								-.1673	
160.000					-.3724								-.1595	
170.000					-.3647								-.1707	
180.000					-.3634	-.2734	-.2373	-.2278	-.2140	-.2001	-.1874	-.1909	-.1898	-.1364

X/L	.4500	.4680	.4880	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PHI

90.000	-.1426	-.1567	-.1614	-.1465	-.1426	-.1427	-.1216	.0000	-.0960	-.0636	-.0621	-.0787	-.0921	-.1208	.0000
100.000	-.1767	-.1871	-.1703	-.1540	-.1382	-.1518	-.1533	-.1511	-.1237	-.1235	-.0715	-.0708	-.0866	-.0886	-.1040
110.000	-.2024	-.1821	-.1627	-.1536	-.1480	-.1607	-.1305	-.1507	-.1237	-.1111	-.0982	-.0800	-.0803	-.0883	-.1120
120.000						-.1393								-.0754	
130.000						-.1207								-.0605	
140.000						-.0780								-.0607	
150.000						-.0590								-.0526	
160.000						-.0666								-.0465	
170.000						-.0702								-.0447	
180.000	-.1154	-.1000	-.0688	-.0726	-.0623	-.0610	-.0406	-.0516	-.0677	-.0693	-.0601	-.0581	-.0505	-.0401	.0015

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI

60.000									
70.000									
80.000									
90.000	-.1227	-.0659	-.1406	-.1749	-.1122	.0000			
100.000	-.1567	-.1589	-.1646	-.0875	-.0303	-.0511			
110.000	-.1337	-.1457	-.0347	.0303	.0459	-.0090			
120.000						.1870			
130.000						.2828			
140.000						.1518			
150.000						.1961			
160.000						.2699			
170.000						.2121			
180.000	-.1258	-.1108	.1232	.2309	.3036	.4711			

AMES 86-63D PRESSURE VENTING - SHUTTLE ORBITER

(RECORD4)

MACH (9) = 1.401 ALPHA (2) = 0.513

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3370	.3750	.3940	.4050	.4310
PHI															
60.000	.1757	.1702	.1129												
70.000	.1701	.1768	.1305												
80.000	.1540	.1735	.1504												
90.000		.1996	.1308	.1016	.1387	.1140	.0900	.0600	.1282	.1236	.1116	.1199	.1549	.1609	
100.000					.1380	.1455	.1295	.1061	.1200	.1246	.1492	.1591	.1866	.1790	
110.000					.1668	.1705	.1838	.1559	.1865	.2022	.2026	.2111	.1988	.2218	
120.000					.1686									.2093	
130.000					.3341									.2136	
140.000					.4612									.1893	
150.000					.4289									.1756	
160.000					.3928									.1761	
170.000					.3865									.1759	
180.000					.3677	.2792	.2476	.2429	.2352	.1993	.2067	.1875	.1732	.1293	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6750	.6880	.7100
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PHI

90.000	.1471	.1585	.1765	.1549	.1817	.1990	.1813	.0900	.1486	.1273	.0955	.1163	.1117	.1621	.0000
100.000	.1808	.2008	.1992	.1999	.1986	.1808	.1861	.1727	.1444	.1503	.1036	.1102	.1067	.1089	.1634
110.000	.2287	.2280	.2013	.2287	.2077	.1759	.1856	.1764	.1611	.1457	.1253	.1154	.0958	.1268	.1618
120.000					.1464									.1008	
130.000					.1609									.1076	
140.000					.1098									.0848	
150.000					.0846									.0767	
160.000					.0756									.0425	
170.000					.0618									.0388	
180.000	.1087	.0991	.0568	.0557	.0394	.0577	.0610	.0396	.0629	.0643	.0561	.0515	.0528	.0261	.0201

X/L	.7290	.7470	.7670	.7850	.8050	.8290	.8620	.9000	.9400
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PHI

60.000							.0646		
70.000							.0999	.0146	.0000
80.000							.1648	.0855	.1141
90.000	.1662	.0818	.1845	.2462	.1574	.0000	.1508	.1913	.0837
100.000	.1832	.1856	.2216	.1380	.0619	.0904			
110.000	.1578	.1889	.1074	.0038	.0087	.0469			
120.000					.1517				
130.000					.2448				
140.000					.1456				
150.000					.1735				
160.000					.2938				
170.000					.2271				
180.000	.1315	.1649	.0557	.2466	.3412	.5706			

CAYE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OA63

PAGE 1138

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC'D)

$$\text{MACH} (9) = 1.471 \quad \text{ALPHA} (4) = 12.690$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
Phi															
60.000	.1634	.1543	.1200												
70.000	.1080	.1477	.1047												
80.000	.0672	.1333	.1120												
90.000		.1344	.1058	.1058	-.0717	-.1169	-.0935	.0000	-.0679	-.1013	-.0984	-.1013	-.1074	-.1444	-.1462
100.000					-.1087	-.1087	-.1208	-.1037	-.0860	-.1068	-.1086	-.1485	-.1486	-.1848	-.1696
110.000					-.1399	-.1399	-.1503	-.1487	-.1370	-.1638	-.1777	-.1935	-.2071	-.1872	-.2272
120.000					-.1625									-.1933	
130.000					-.3298									-.3063	
140.000					-.4878									-.2450	
150.000					-.4672									-.2040	
160.000					-.4270									-.1892	
170.000					-.4195									-.1736	
180.000					-.3816		-.2991	-.2761	-.2596	-.2444	-.2262	-.2142	-.1750	-.1562	-.1112
X/L	.4500	.4680	.4880	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
Phi															
90.000	-.1399	-.1977	-.1767	-.1726	-.1851	-.1978	-.1820	.0000	-.2008	-.1857	-.1682	-.1822	-.2139	-.2413	.0000
100.000	-.1779	-.2025	-.2101	-.2083	-.2094	-.2269	-.2341	-.2356	-.2190	-.2242	-.1861	-.1800	-.1721	-.1896	-.2082
110.000	-.2396	-.2420	-.2469	-.2572	-.2552	-.2757	-.2753	-.2751	-.2586	-.2172	-.1921	-.1697	-.1541	-.1783	-.2062
120.000					-.3082									-.1392	
130.000					-.3488									-.1307	
140.000					-.1397									-.1837	
150.000					-.1246									-.1112	
160.000					-.0950									-.0832	
170.000					-.0711									-.0681	
180.000	-.0988	-.0990	-.0687	-.0799	-.0598	-.0549	-.0646	-.0569	-.0665	-.0672	-.0654	-.0692	-.0657	-.0667	-.0412
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
Phi															
60.000							-.1554								
70.000							-.2237	-.1187	.0000						
80.000							-.2420	-.2167	-.1863						
90.000	-.2192	-.1236	-.2594	-.3354	-.2593	.0000	-.2075	-.2429	-.1687						
100.000	-.2444	-.2464	-.2684	-.2435	-.1443	-.1702									
110.000	-.1966	-.2428	-.2025	-.0562	-.0537	-.1383									
120.000						.0737									
130.000						.1355									
140.000						.0681									

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A83

ANES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (9) = 1.401 ALPHA (5) = 14.810

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP											
X/L		.0870	.1260	.1640	.2030	.2420	.2810	.3200	.3590	.3980	.4370	.4760	.5150
PHI													
60.000	.1511	.1360	.0973										
70.000	.0694	.1256	.0956										
80.000	.0526	.0691	.0936										
90.000		.0991	.0687	-.0665	-.1012	-.0878	.0000	-.0641	-.0714	-.0754	-.0880	-.0977	-.1367
100.000					-.1046	-.1112	-.0962	-.0776	-.0891	-.1004	-.1358	-.1557	-.1635
110.000					-.1353	-.1370	-.1390	-.1263	-.1569	-.1720	-.1851	-.1728	-.2235
120.000					-.1664							-.1836	
130.000					-.3256							-.3676	
140.000					-.4984							-.5072	
150.000					-.4873							-.2206	
160.000					-.4483							-.1985	
170.000					-.4339							-.1715	
180.000					-.3810	-.3038	-.2632	-.2650	-.2504	-.2293	-.2097	-.1742	-.1104
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6880
													.7100
PHI													
90.000	-.1369	-.1519	-.1720	-.1689	-.1612	-.1991	-.1970	.0000	-.1948	-.1867	-.1817	-.1858	-.2527
100.000	-.1735	-.2030	-.2063	-.2019	-.2077	-.2282	-.2290	-.2295	-.2159	-.2284	-.2010	-.1970	-.2071
110.000	-.2342	-.2363	-.2427	-.2566	-.2590	-.2818	-.2768	-.2742	-.2658	-.2459	-.2209	-.1924	-.1889
120.000						-.3248							-.1521
130.000						-.3412							-.1543
140.000						-.2345							-.2500
150.000						-.1230							-.1729
160.000						-.0923							-.1136
170.000						-.0717							-.0914
180.000	-.0928	-.0850	-.0598	-.0609	-.0638	-.0612	-.0641	-.0713	-.0796	-.0870	-.0840	-.0855	-.0772
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400				-.0830
PHI													
60.000													
70.000													
80.000													
90.000	-.2715	-.1096	-.2755	-.3782	-.3209	.0000							
100.000	-.2775	-.2746	-.3298	-.2777	-.1902	-.2146							
110.000	-.2447	-.2703	-.2222	-.0876	-.0810	-.1826							
120.000						.0375							
130.000						.0982							
140.000						.0137							
150.000						.1110							
160.000						.3344							
170.000						.2939							
180.000	-.2202	-.2359	-.0708	.1761	.3429	.6729							

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC-004)

$$\text{MACM} (9) = 1.450 \quad \text{ALPHA} (6) = 16.670$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

W/L	.0070	.1260	.1640	.2030	.2420	.2640	.3010	.3380	.3570	.3750	.3940	.4050	.4310
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PMI

[illegible]

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PHY

Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100																																																																																																						
90,000	-1,282	-1,459	-1,636	-1,813	-1,990	-2,167	-2,344	-2,521	-2,698	-2,875	-3,052	-3,229	-3,406	-3,583	-3,760	-3,937	-4,114	-4,291	-4,468	-4,645	-4,822	-5,000	-5,177	-5,354	-5,531	-5,708	-5,885	-6,062	-6,239	-6,416	-6,593	-6,770	-6,947	-7,124	-7,301	-7,478	-7,655	-7,832	-8,009	-8,186	-8,363	-8,540	-8,717	-8,894	-9,071	-9,248	-9,425	-9,602	-9,779	-9,956	-10,133	-10,310	-10,487	-10,664	-10,841	-11,018	-11,195	-11,372	-11,549	-11,726	-11,903	-12,080	-12,257	-12,434	-12,611	-12,788	-12,965	-13,142	-13,319	-13,496	-13,673	-13,850	-14,027	-14,204	-14,381	-14,558	-14,735	-14,912	-15,089	-15,266	-15,443	-15,620	-15,797	-15,974	-16,151	-16,328	-16,505	-16,682	-16,859	-17,036	-17,213	-17,390	-17,567	-17,744	-17,921	-18,098	-18,275	-18,452	-18,629	-18,806	-18,983	-19,160	-19,337	-19,514	-19,691	-19,868	-20,045	-20,222	-20,399	-20,576	-20,753	-20,930	-21,107	-21,284	-21,461	-21,638	-21,815	-21,992	-22,169	-22,346	-22,523	-22,700	-22,877	-23,054	-23,231	-23,408	-23,585	-23,762	-23,939	-24,116	-24,293	-24,470	-24,647	-24,824	-25,001	-25,178	-25,355	-25,532	-25,709	-25,886	-26,063	-26,240	-26,417	-26,594	-26,771	-26,948	-27,125	-27,302	-27,479	-27,656	-27,833	-28,010	-28,187	-28,364	-28,541	-28,718	-28,895	-29,072	-29,249	-29,426	-29,603	-29,780	-29,957	-30,134	-30,311	-30,488	-30,665	-30,842	-31,019	-31,196	-31,373	-31,550	-31,727	-31,904	-32,081	-32,258	-32,435	-32,612	-32,789	-32,966	-33,143	-33,320	-33,497	-33,674	-33,851	-34,028	-34,205	-34,382	-34,559	-34,736	-34,913	-35,090	-35,267	-35,444	-35,621	-35,798	-35,975	-36,152	-36,329	-36,506	-36,683	-36,860	-37,037	-37,214	-37,391	-37,568	-37,745	-37,922	-38,099	-38,276	-38,453	-38,630	-38,807	-38,984	-39,161	-39,338	-39,515	-39,692	-39,869	-40,046	-40,223	-40,400	-40,577	-40,754	-40,931	-41,108	-41,285	-41,462	-41,639	-41,816	-41,993	-42,170	-42,34

2/

PHI

[illegible]

AMES 66-63D PRESSURE VENTING - SHUTTLE ORBITER

(REC004)

MACH (10) = 1.501 ALPHA (2) = 0.442

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2840 .3016 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PMI

60.000 .1872 .1876 .1178
 70.000 .1779 .1777 .1310
 80.000 .1645 .1705 .1456
 90.000 .1731 .1491 -.0591 -.0982 -.0747 .0000 -.0324 -.0840 -.0769 -.0882 -.0803 -.1200 -.1189
 100.000 .1094 -.1003 -.0901 -.0773 -.0848 -.0937 -.1175 -.1174 -.1409 -.1342
 110.000 .1231 -.1261 -.1360 -.1266 -.1451 -.1522 -.1585 -.1615 -.2064 -.1735
 120.000 -.1169
 130.000 -.2739
 140.000 -.3914
 150.000 -.3622
 160.000 -.3300
 170.000 -.3311
 180.000 -.3225 -.2410 -.2092 -.1995 -.1904 -.1734 -.1713 -.1620 -.1536 -.1182

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PMI

90.000 -.1089 -.1200 -.1317 -.1270 -.1370 -.1481 -.1437 .0000 -.1287 -.1110 -.0758 -.0844 -.1153 -.1144 .0000
 100.000 -.1387 -.1564 -.1575 -.1519 -.1522 -.1615 -.1549 -.1484 -.1221 -.1317 -.0905 -.0824 -.0988 -.1379
 110.000 -.1812 -.1821 -.1803 -.1795 -.1668 -.1684 -.1549 -.1435 -.1354 -.1285 -.1155 -.1001 -.0874 -.1009 -.1302
 120.000
 130.000
 140.000
 150.000
 160.000
 170.000
 180.000 -.0946 -.0816 -.0514 -.0429 -.0429 -.0381 -.0403 -.0397 -.0406 -.0417 -.0370 -.0395 -.0347 -.0346 -.0180

X/L

.7290 .7470 .767 .7850 .8030 .8290 .8620 .9000 .9400

PMI

60.000
 70.000
 80.000
 90.000
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 970.000
 980.000
 990.000
 1000.000

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (10) = 1.496 ALPHA (4) = 12.630

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0670 .1260 .1640 .2030 .2420 .2810 .3190 .3580 .3970 .4350 .4730 .5110

PHI

60.000 .1769 .1659 .1215
 70.000 .1332 .1971 .1257
 80.000 .1103 .1363 .1306
 90.000 .1445 .1082 -.0327 -.0711 -.0561 .0000 -.0313 -.0821 -.0596 -.0660 -.1136 -.1014
 100.000 .0711 -.0795 -.0642 -.0473 -.0563 -.1049 -.1049 -.1049 -.1049 -.1049 -.1049 -.1049
 110.000 -.0560 -.1018 -.1087 -.0561 -.1169 -.1341 -.1443 -.1593 -.1593 -.1593 -.1593 -.1593
 120.000 -.1122
 130.000 -.2663
 140.000 -.4153
 150.000 -.3946
 160.000 -.3604
 170.000 -.3562
 180.000 -.3339 -.2563 -.2322 -.2216 -.2117 -.1933 -.1836 -.1564 -.1447 -.1025

X/L

PHI

60.000 -.1007 -.1145 -.1290 -.1261 -.1372 -.1557 -.1556 .0000 -.1612 -.1534 -.1321 -.1399 -.1699 -.1976 .0000
 70.000 -.1360 -.1499 -.1591 -.1571 -.1610 -.1640 -.1661 -.1661 -.1661 -.1661 -.1661 -.1661 -.1661 -.1661
 80.000 -.1913 -.1931 -.1971 -.2040 -.2055 -.2296 -.2296 -.2309 -.2221 -.2149 -.1900 -.1677 -.1399 -.1456 -.1942
 90.000 -.2854
 100.000 -.3210
 110.000 -.1071
 120.000 -.1026
 130.000 -.0727
 140.000 -.0528
 150.000 -.0423 -.0305 -.0423 -.0366 -.0423 -.0423 -.0423 -.0423 -.0423 -.0423 -.0423 -.0423
 160.000 -.0819 -.0707 -.0492 -.0305 -.0423 -.0423 -.0423 -.0423 -.0423 -.0423 -.0423 -.0423 -.0423
 170.000 .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

X/L

PHI

60.000
 70.000
 80.000
 90.000
 100.000
 110.000
 120.000
 130.000
 140.000
 150.000
 160.000
 170.000
 180.000

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(RECORD)

AMES 66-650 PRESSURE VENTING - SHUTTLE ORBITER

MACH (10) = 1.459 ALPHA (5) = 14.740

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI															
60.000	.1721	.1597	.1181												
70.000	.1119	.1484	.1183												
80.000	.0760	.1128	.1148												
90.000		.1177	.1001	.1338	-.0856	-.0528	.0000	-.0327	-.0389	-.0433	-.0511	-.0610	-.1028	-.1064	
100.000					-.0626	-.0718	-.0590	-.0451	-.0555	-.0632	-.0845	-.0971	-.1115	-.1193	
110.000					-.0910	-.0926	-.0879	-.0879	-.1116	-.1299	-.1420	-.1546	-.1375	-.1766	
120.000					-.1149								-.1624		
130.000					-.2639								-.3516		
140.000					-.4245								-.2716		
150.000					-.4150								-.1871		
160.000					-.3792								-.1686		
170.000					-.3717								-.1498		
180.000					-.3425	-.2674	-.2433	-.2297	-.2126	-.1930	-.1784	-.1518	-.1369	-.0995	

X/L	.4500	.4880	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PMI															
90.000	-.0937	-.1082	-.1251	-.1244	-.1368	-.1553	-.1547	.0000	-.1573	-.1458	-.1387	-.1422	-.1638	-.2033	.0000
100.000	-.1284	-.1550	-.1588	-.1564	-.1626	-.1842	-.1846	-.1879	-.1744	-.1886	-.1598	-.1583	-.1653	-.1782	-.2210
110.000	-.1873	-.1875	-.1920	-.2055	-.2082	-.2293	-.2302	-.2309	-.2241	-.2208	-.2048	-.1943	-.1655	-.1764	-.2160
120.000						-.2882							-.1417		
130.000						-.3594							-.1531		
140.000						-.1969							-.2363		
150.000						-.1124							-.1572		
160.000						-.0779							-.1018		
170.000						-.0574							-.0843		
180.000	-.0801	-.0701	-.0459	-.0508	-.0501	-.0478	-.0502	-.0350	-.0640	-.0722	-.0692	-.0745	-.0710	-.0646	-.0559

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI									
60.000									
70.000									
80.000									
90.000	-.2241	-.1024	-.2419	-.3307	-.2830	.0000			
100.000	-.2459	-.2432	-.2909	-.2443	-.1556	-.1782			
110.000	-.2237	-.2487	-.1888	-.0637	-.0593	-.1410			
120.000					.0745				
130.000					.1079				
140.000					.0240				
150.000					.0955				
160.000					.3191				
170.000					.2812				
180.000	-.2098	-.2187	.0607	.1006	.3227	.6735			

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OA63

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC004)

MACH (10) = 1.496 ALPHA (5) = 16.800

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .1671 .1310 .1141
 70.000 .0949 .1311 .1095
 80.000 .0501 .0982
 90.000 .0865 .0701 -.0394 -.0672 -.0570 .0000 -.0405 -.0418 -.0445 -.0493 -.0564 -.1027 -.1056
 100.000 -.0668 -.0714 -.0579 -.0498 -.0593 -.0763 -.0884 -.1078 -.1189
 110.000 -.0918 -.0920 -.0939 -.0831 -.1052 -.1214 -.1352 -.1517 -.1247 -.1721
 120.000 -.1174
 130.000 -.2618
 140.000 -.4303
 150.000 -.4289
 160.000 -.3969
 170.000 -.3827
 180.000 -.3432 -.2703 -.2464 -.2301 -.2161 -.1960 -.1793 -.1490 -.1310 -.0925

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.0924 -.1076 -.1245 -.1184 -.1273 -.1431 -.1395 .0000 -.1471 -.1483 -.1447 -.1523 -.1772 -.2152 .0000
 100.000 -.1276 -.1525 -.1560 -.1514 -.1540 -.1718 -.1719 -.1756 -.1618 -.1845 -.1589 -.1658 -.1744 -.1895 -.2286
 110.000 -.1812 -.1839 -.1916 -.2021 -.2039 -.2234 -.2209 -.2206 -.2171 -.2182 -.2170 -.2061 -.1812 -.1934 -.2239
 120.000 -.3065
 130.000 -.3563
 140.000 -.3835
 150.000 -.1404
 160.000 .0947
 170.000 -.0722
 180.000 -.0621 -.0591 -.0591 -.0623 -.0702 -.0813 -.0886 -.0945 -.0889 -.0929 -.0927 -.1103 -.0931 -.0816

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000
 70.000
 80.000
 90.000
 100.000
 110.000
 120.000
 130.000
 140.000
 150.000
 160.000
 170.000
 180.000

-.2778
 -.4198
 -.3973
 -.3193
 -.3224
 -.3083
 -.2719
 -.1969
 -.2319
 -.0397
 .0715
 -.0247
 .1170
 .3167
 .2825
 .3127
 .7440

(RECORDS)

JAMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (1) = 1.747 ALPHA (1) = 6.264

SECTION (1) FUSELAGE DEFECENT VARIABLE CP

PHI							
130,000						.2330	
140,000						.2410	
150,000						.2632	
160,000						.3026	
170,000						.3186	
180,000						.2861	
						.2248	
						.0929	
						.7476	
						.7290	
						.7670	
						.7650	
						.6030	
						.6290	
						.6620	
						.9007	
						.9400	

MACH (1) = 1.747 ALPHA (2) = 8.466

SECTION (1) FUSE_AGE
DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
60.000	.1285	.1014	.0569												
70.000	.1279	.1077	.0666												
80.000	.1280	.1128	.0777												
90.000			.0974	.0409	-.0329	-.0951	-.0897	.0000	-.0749	-.0894	-.0854	-.0931	-.0932	-.1153	-.1167
100.000						-.0954	-.1037	-.1031	-.0983	-.1022	-.1062	-.1191	-.1193	-.1332	-.1329
110.000						-.1339	-.1319	-.1336	-.1325	-.1436	-.1476	-.1508	-.1505	-.1233	-.1581
120.000							-.1256							-.0739	
130.000							-.2203							-.1142	
140.000							-.2807							-.1153	
150.000							-.2642							-.1156	
160.000							-.2537							-.1269	
170.000							-.2596							-.1315	
180.000							-.2585	-.2174	-.1798	-.1804	-.1935	-.1433	-.1400	-.1326	-.1148

XX/L	.4500	.4600	.4800	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1167	-.1210	-.1247	-.1292	-.1297	-.1224	-.1168	.0000	-.1581	-.1058	-.0845	-.0765	-.0782	-.0883	.0000
100.000	-.1343	-.1417	-.1372	-.1270	-.1205	-.1142	-.1122	-.1096	-.0995	-.1064	-.0885	-.0819	-.0655	-.0647	-.0930
110.000	-.1594	-.1434	-.1301	-.1142	-.1102	-.1065	-.1032	-.1007	-.0949	-.0926	-.0911	-.0825	-.0650	-.0589	-.0767
120.000						-.0901							-.0572		
130.000						-.0739							-.0632		
140.000						-.0650							-.0500		
150.000						-.0569							-.0457		
160.000						-.0543							-.0440		
170.000						-.0538							-.0419		
180.000	-.11020	-.0895	-.0683	-.0671	-.0629	-.0575	-.0563	-.0543	-.0538	-.0555	-.0500	-.0511	-.0474	-.0460	-.0394
1/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						

	X/L				
	.7290	.7470	.7670	.7850	.8030
				.8290	.8620
					.9000
					.9400

PMI

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(RECORDS)

AMES 86-830 PRESSURE VENTING - SHUTTLE ORBITER

MACH (1) = 1.747 ALPHA (2) = 8.466

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 -.1302
70.000 -.1377 -.1420 .0000
80.000 -.1214 -.1589 -.0615
90.000 -.1285 -.0638 -.1546 -.1697 -.1145 .0000
100.000 -.1279 -.1311 -.1549 -.0947 -.0394 -.0586
110.000 -.1087 -.1259 -.0761 .0220 .7249 -.0443
120.000 .1204
130.000 .1920
140.000 .1866
150.000 .2713
160.000 .3289
170.000 .3435
180.000 -.0921 -.1016 -.0205 .1293 .2502 .3800

MACH (1) = 1.747 ALPHA (3) = 10.460

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .1219 .0963 .0366
70.000 .1060 .0971 .0603
80.000 .1017 .0962 .0706
90.000 .0900 .0360 -.0709 -.0934 -.0883 .0000 -.0723 -.0843 -.0811 -.0865 -.0906 -.1173 -.1139
100.000 -.0966 -.0937 -.0905 -.0845 -.0902 -.0977 -.1122 -.1142 -.1295
110.000 -.1131 -.1156 -.1233 -.1233 -.1353 -.1413 -.1457 -.1539 -.1250 -.1616
120.000 -.1142
130.000 -.2237
140.000 -.2915
150.000 -.2759
160.000 -.2622
170.000 -.2673
180.000 -.2676 -.2193 -.1806 -.1623 -.1566 -.1492 -.1457 -.1408 -.1369 -.1193

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.1108 -.1153 -.1219 -.1221 -.1253 -.1349 -.1394 .0000 -.1357 -.1348 -.1167 -.1046 -.0995 -.1087 .0000
100.000 -.1335 -.1431 -.1428 -.1369 -.1366 -.1352 -.1411 -.1391 -.1293 -.1144 -.1052 -.0882 -.0810 -.1082
110.000 -.1869 -.1641 -.1596 -.1522 -.1437 -.1369 -.1325 -.1296 -.1227 -.1167 -.1135 -.1020 -.0831 -.0727 -.0890
120.000 .1179
130.000 -.0934
140.000 -.0747
150.000 -.0641

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(RECORDS)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (1) = 1.747 ALPHA (3) = 10.460

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP														
X/L		.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI																
160.000																
170.000																
180.000																
X/L		.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						

PHI																
60.000																
70.000																
80.000																
90.000																
100.000																
110.000																
120.000																
130.000																
140.000																
150.000																
160.000																
170.000																
180.000																

MACH (1) = 1.748 ALPHA (4) = 12.530

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP														
X/L		.0670	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI																
60.000	.1135	.0684	.0533													
70.000	.0696	.0684	.0561													
80.000	.0773	.0815	.0621													
90.000			.0770	.0319	-.0631	-.0988	-.0905	.0000	-.0728	-.0768	-.0777	-.0811	-.0866	-.1187	-.1187	-.1056
100.000						-.1005	-.0845	-.0771	-.0722	-.0782	-.0859	-.1002	-.1065	-.1184	-.1184	-.1246
110.000						-.1013	-.1010	-.1065	-.1068	-.1233	-.1333	-.1394	-.1473	-.1198	-.1198	-.1587
120.000							-.1042							-.1073	-.1073	
130.000							-.2180							-.1595	-.1595	
140.000							-.2941							-.1448	-.1448	
150.000							-.2796							-.1349	-.1349	
160.000							-.2639							-.1332	-.1332	
170.000							-.2687							-.1417	-.1417	
180.000							-.2684	-.2194	-.1852	-.1726	-.1681	-.1601	-.1570	-.1485	-.1452	-.1229
X/L	.4300	.4680	.4860	.5030	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100	

PHI

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (REC005)

$$\text{MACM} (1) = 1.748 \quad \text{ALPHA} (4) = 12.530$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CF

K/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PKI															
90.000	-.1059	-.1119	-.1190	-.1209	-.1249	-.1363	-.1408	.0000	-.1486	-.1532	-.1425	-.1322	-.1256	-.1293	.0000
100.000	-.1298	-.1374	-.1400	-.1414	-.1419	-.1539	-.1578	-.1615	-.1546	-.1632	-.1443	-.1299	-.1086	-.0991	-.1239
110.000	-.1706	-.1712	-.1737	-.1743	-.1731	-.1737	-.1699	-.1658	-.1540	-.1414	-.1310	-.1175	-.0957	-.0864	-.1021
120.000						-.1595								-.0827	
130.000						-.1299								-.1161	
140.000						-.0893								-.0827	
150.000						-.0729								-.0574	
160.000						-.0651								-.0447	
170.000						-.0600								-.0413	
180.000						.0692	-.0663	-.0663	-.0568	-.0582	-.0525	-.0490	-.0470	-.0462	-.0471

	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9010	.9400
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PHI

60,000	-1,989	-2,624	.0000
70,000	-2,590	-2,395	-2,464
80,000	-2,206	-1,791	-2,092
90,000	-1,703	-1,221	-1,963

90,000	-.1703	-.0749	-.2061	-.2221	-.1963	.0220
100,000	-.1726	-.1625	-.2046	-.1608	-.1007	-.1144
110,000	-.1471	-.1566	-.1196	-.0322	-.0213	-.0857
120,000						-.0866
130,000						-.1328
140,000						-.0438
150,000						-.2734
160,000						-.3515
170,000						.3201
180,000	-.1201	-.1330	-.0451	-.0331	.2768	-.5702

$$\text{MACH} (1) = 1.747 \quad \text{ALPHA} (5) = 14.650$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

[illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORDS)

MACH (1) = 1.747 ALPHA (5) = 14.650

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PHI

160.000 - .2738
 170.000 - .2795
 180.000 - .2812 - .2365 - .1995 - .1869 - .1815 - .1727 - .1644 - .1553 - .1473 - .1224

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 - .1023 - .1125 - .1216 - .1290 - .1287 - .1395 - .1440 .0000 - .1521 - .1593 - .1487 - .1504 - .1513 - .1576 .0000
 100.000 - .1241 - .1364 - .1429 - .1420 - .1449 - .1554 - .1602 - .1602 - .1705 - .1567 - .1501 - .1386 - .1311 - .1480
 110.000 - .1693 - .1704 - .1732 - .1749 - .1764 - .1854 - .1858 - .1843 - .1771 - .1676 - .1585 - .1418 - .1202 - .1156 - .1225
 120.000 - .1962
 130.000 - .2338
 140.000 - .1141
 150.000 - .0836
 160.000 - .0687
 170.000 - .0612
 180.000 - .1094 - .1003 - .0799 - .0782 - .0686 - .0675 - .0670 - .0796 - .0641 - .0667 - .0598 - .0606 - .0612 - .0586 - .0635

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 - .2316
 70.000 - .3195 - .3089 .0000
 80.000 - .2800 - .2983 - .2828
 90.000 - .1955 - .0927 - .2184 - .2559 - .2367 .0000
 100.000 - .1966 - .1903 - .2342 - .1863 - .1351 - .1566
 110.000 - .1689 - .1783 - .1377 - .0338 - .0472 - .1211
 120.000 .0543
 130.000 .0836
 140.000 - .0429
 150.000 .2596
 160.000 .3542
 170.000 .3191
 180.000 - .1417 - .1308 - .0666 - .0618 .2365 .5917

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECORDS)

MACH (1) = 1.746 ALPHA (6) = 16.630

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI														
60.000	.0960	.0792	.0444											
70.000	.0476	.0821	.0422											
80.000	.0239	.0399	.0422											
90.000		.0376	.0234	-.0627	-.0977	-.0894	.0000	-.0797	-.0792	-.0800	-.0809	-.0842	-.1201	-.1074
100.000					-.0937	-.0903	-.0840	-.0786	-.0806	-.0831	-.0928	-.0980	-.1088	-.1159
110.000					-.0869	-.0897	-.0980	-.0962	-.1145	-.1236	-.1303	-.1411	-.1136	-.1550
120.000					-.1031								-.1122	
130.000					-.2147								-.2663	
140.000					-.3132								-.2080	
150.000					-.3061								-.1612	
160.000					-.2873								-.1473	
170.000					-.2924								-.1473	
180.000					-.2944	-.2491	-.2087	-.1976	-.1899	-.1797	-.1709	-.1578	-.1479	-.1230

X/L	.4500	.4880	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.1026	-.1108	-.1213	-.1247	-.1289	-.1405	-.1472	.0000	-.1547	-.1670	-.1618	-.1799	-.1868	.0000
100.000	-.1230	-.1366	-.1414	-.1388	-.1434	-.1550	-.1613	-.1641	-.1587	-.1739	-.1618	-.1598	-.1497	-.1694
110.000	-.1636	-.1643	-.1689	-.1722	-.1773	-.1870	-.1891	-.1874	-.1822	-.1742	-.1707	-.1575	-.1328	-.1402
120.000						-.1989							-.1112	
130.000						-.2282							-.1176	
140.000						-.1705							-.1627	
150.000						-.0972							-.1216	
160.000						-.0745							-.0908	
170.000						-.0661							-.0802	
180.000	-.1079	-.0932	-.0762	-.0742	-.0745	-.0748	-.0762	-.0814	-.0753	-.0799	-.0811	-.0845	-.0839	-.0890

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
60.000							-.2653		
70.000							-.3563	-.3268	.0000
80.000							-.3291	-.3399	-.3025
90.000	-.2094	-.1156	-.2737	-.2923	-.2757	.0000	-.2796	-.2979	-.3033
100.000	-.2266	-.2191	-.2760	-.2134	-.1691	-.1963			
110.000	-.1948	-.2080	-.1359	-.0773	-.0724	-.1560			
120.000						.0285			
130.000						.0430			
140.000						-.0993			
150.000						-.2746			
160.000						-.3570			
170.000						.3091			
180.000	-.1496	-.1734	-.0936	-.0896	.1772	.5895			

MACH (2) = 2.021 ALPHA (1) = 6.747

AMES 68-630 PRESSURE VENTING - SHUTTLE ORBITER

(Records)

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP													
X/L	.0070	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
PMI															
60.000	.1253	.0993	.0549												
70.000	.1321	.1020	.0644												
80.000	.1378	.1104	.0769												
90.000		.0931	.0376	.0376	-.0368	-.0731	-.0745	.0000	-.0632	-.0715	-.0703	-.0712	-.0703	-.0919	-.0830
100.000						-.0742	-.0610	-.0798	-.0813	-.0840	-.0867	-.0926	-.0922	-.0919	-.0970
110.000						-.1026	-.1042	-.1042	-.1024	-.1141	-.1149	-.1160	-.1145	1.5310	-.1127
120.000						-.0814								2.1650	
130.000						-.1439								-.1186	
140.000						-.1949								-.1169	
150.000						-.1880								-.1195	
160.000						-.1809								-.1201	
170.000						-.1803								-.1166	
180.000						-.1803	-.1706	-.1483	-.1301	-.1194	-.1118	-.1148	-.1148	-.1145	-.1124
X/L	.4900	.4660	.4860	.5030	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	-.0810	-.0654	-.0863	-.0862	-.0848	-.0883	-.0909	.0000	-.0900	-.0897	-.0784	-.0697	-.0646	-.0709	.0000
100.000	-.0995	-.1011	-.0975	-.0904	-.0892	-.0880	-.0824	-.0943	-.0849	-.0897	-.0800	-.0736	-.0619	-.0556	-.0716
110.000	-.1120	-.1055	-.0993	-.0631	-.0898	-.0886	-.0882	-.0849	-.0837	-.0828	-.0791	-.0724	-.0631	-.0556	-.0596
120.000						-.0753								-.0574	
130.000						-.0674								-.0469	
140.000						-.0656								-.0403	
150.000						-.0608								-.0376	
160.000						-.0596								-.0352	
170.000						-.0614								-.0358	
180.000	-.1087	-.0966	-.0800	-.0756	-.0702	-.0659	-.0611	-.0557	-.0512	-.0494	-.0436	-.0397	-.0382	-.0385	-.0380
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PMI															
60.000							-.1095								
70.000							-.0946	-.1092	.0000						
80.000							-.0763	-.1071	-.1032						
90.000	-.0998	-.0912	-.1231	-.1269	-.0904	.0000		-.0916	-.1236						
100.000	-.0908	-.0937	-.1019	-.0770	-.0186	-.0303									
110.000	-.0641	-.0749	-.0632	.0170	.0396	-.0210									
120.000						.1268									
130.000						.2673									
140.000						.1954									
150.000						-.2380									
160.000						.2567									
170.000						.2671									
180.000	-.0841	-.0432	-.0273	.0960	.1745	.2630									

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(RECORDS)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (2) = 2.018 ALPHA (2) = 8.800

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L .0870 .1280 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .1209 .0962 .0545
 70.000 .1164 .0959 .0620
 80.000 .1147 .0935 .0712
 90.000 .1052 .0832 .0322 .0591 .0799 .0767 .0000 .0642 .0704 .0660 .0692 .0677 .0934 .0819
 100.000 .0786 .0746 .0746 .0737 .0776 .0811 .0877 .0881 .0937 .0964
 110.000 .0785 .0930 .0963 .0972 .1097 .1138 .1156 .1180 .8196 .1218
 120.000 .0796
 130.000 .1513
 140.000 .2075
 150.000 .2016
 160.000 .1936
 170.000 .1947
 180.000 .1950 .1643 .1429 .1331 .1266 .1245 .1183 .1224 .1153

X/L

.4500 .4880 .4880 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 .1040 .0893 .0936 .0926 .0935 .0920 .1031 .0000 .1082 .1097 .1010 .1095 .1087 .0000
 100.000 .0979 .1071 .1077 .1065 .1068 .1100 .1106 .1118 .1064 .1106 .1016 .1080 .1042 .0833
 110.000 .1234 .1242 .1228 .1207 .1169 .1171 .1127 .1094 .1025 .1010 .0980 .0932 .0821 .0695
 120.000 .1053
 130.000 .0794
 140.000 .0683
 150.000 .0623
 160.000 .0605
 170.000 .0590
 180.000 .1091 .0997 .0831 .0787 .0728 .0662 .0623 .0572 .0536 .0515 .0482 .0473 .0455 .0441

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 .1556
 70.000 .1350 .1445 .0000
 80.000 .1066 .1341 .1466
 90.000 .1152 .0821 .1397 .1463 .1257 .0000
 100.000 .1149 .1104 .1358 .1065 .0456 .0540
 110.000 .0955 .1083 .0859 .0044 .0188 .0271
 120.000 .1291
 130.000 .1717
 140.000 .1488
 150.000 .2139
 160.000 .2587
 170.000 .2841
 180.000 .0812 .0928 .0444 .0258 .1711 .2972

AMES 68-630 PRESSURE VENTING - SHUTTLE ORBITER (RECORDS)

MACH (2) = 2.018 ALPHA (3) = 10.000

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI														
60.000	.1153	.0926	.0521											
70.000	.1013	.0837	.0569											
80.000	.0926	.0687	.0626											
90.000	.0789	.0313	.0313	-.0303	-.0835	-.0797	.0000	-.0661	-.0687	-.0660	-.0672	-.0701	-.0997	-.0828
100.000					-.0817	-.0710	-.0684	-.0663	-.0707	-.0737	-.0823	-.0823	-.0991	-.0967
110.000					-.0803	-.0835	-.0892	-.0910	-.1034	-.1100	-.1127	-.1148	.4173	-.1216
120.000					-.0743								.9714	
130.000					-.1561								-.1485	
140.000					-.2165								-.1352	
150.000					-.2105								-.1254	
160.000					-.2028								-.1254	
170.000					-.2046								-.1257	
180.000					-.2049	-.1959	-.1751	-.1537	-.1427	-.1365	-.1337	-.1308	-.1284	-.1192
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6880	.7100
PMI														
90.000	-.0861	-.0890	-.0932	-.0936	-.0955	-.0958	-.1074	.0000	-.1161	-.1194	-.1167	-.1131	-.1083	-.1056
100.000	-.1009	-.1082	-.1109	-.1082	-.1097	-.1159	-.1197	-.1254	-.1221	-.1317	-.1236	-.1218	-.1101	-.0990
110.000	-.1275	-.1290	-.1337	-.1358	-.1346	-.1369	-.1347	-.1353	-.1305	-.1266	-.1203	-.1140	-.1014	-.0851
120.000						-.1420							-.0855	
130.000						-.0957							-.1050	
140.000						-.0771							-.0687	
150.000						-.0669							-.0564	
160.000						-.0618							-.0492	
170.000						-.0606							-.0480	
180.000	-.1077	-.0991	-.0816	-.0784	-.0719	-.0684	-.0651	-.0627	-.0591	-.0591	-.0540	-.0546	-.0513	-.0516
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PMI														
60.000														
70.000														
80.000														
90.000	-.1233	-.0702	-.1553	-.1660	-.1535	.0000								
100.000	-.1329	-.1272	-.1559	-.1266	-.0758	-.0720								
110.000	-.1123	-.1257	-.1048	-.0259	-.0009	-.0409								
120.000						.1161								
130.000						.1357								
140.000						.0792								
150.000						.2131								
160.000						.2890								
170.000						.2863								
180.000	-.0893	-.1099	-.1519	-.0388	.1732	.3880								

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (2) = 2.016 ALPHA (4) = 13.030

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3360 .3570 .3750 .3940 .4030 .4310

PHI

60.000 .1126 .0920 .0540
 70.000 .0897 .0637 .0551
 80.000 .0733 .0745 .0564
 90.000 .0276 .0210 .0813 .0747 .0000 .0656 .0673 .0667 .0668 .0691 .0626 .0813
 100.000 .0810 .0744 .0699 .0714 .0783 .0795 .0795 .0795 .0795 .0795 .0795 .0795
 110.000 .0746 .0744 .0796 .0615 .0955 .1020 .1017 .1062 .1956 .1221
 120.000 .0739
 130.000 .1563
 140.000 .2256
 150.000 .2222
 160.000 .2116
 170.000 .2151
 180.000 .2157 .2021 .1796 .1585 .1499 .1430 .1383 .1312 .1292 .1292 .1170

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 .0836 .0815 .0946 .0960 .1063 .1099 .1192 .1226 .1195 .1198 .1171 .1171 .0000
 100.000 .0961 .1030 .1024 .1004 .1110 .1167 .1234 .1282 .1270 .1357 .1273 .1288 .1141 .1152
 110.000 .1279 .1302 .1320 .1353 .1415 .1420 .1441 .1429 .1357 .1303 .1234 .1123 .1099
 120.000 .1684
 130.000 .1621
 140.000 .0928
 150.000 .0763
 160.000 .0664
 170.000 .0605
 180.000 .1039 .0939 .0803 .0794 .0717 .0676 .0664 .0673 .0634 .0646 .0601 .0595 .0613 .0610 .0623

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 .2243
 70.000 .2201 .2305 .0000
 80.000 .1810 .1977 .2114
 90.000 .1421 .0814 .1752 .1660 .1639 .0000
 100.000 .1439 .1439 .1767 .1522 .1036 .0912
 110.000 .1266 .1412 .1212 .0483 .0146 .0553
 120.000 .1021
 130.000 .1045
 140.000 .0177
 150.000 .2136
 160.000 .2997
 170.000 .2640
 180.000 .1096 .1245 .0650 .0620 .1161 .4403

AMES 64-830 PRESSURE VENTING - SHUTTLE ORBITER

(RECORDS)

MACW (2) = 2.016 ALPHA (5) = 14.950

SECTION (1) FUSELAGE

DEFLECTANT VARIABLE CP

X/L .0670 .1200 .1640 .2030 .2420 .2640 .3010 .3190 .3360 .3570 .3750 .3940 .4030 .4310

PMI

60.000 .1051 .6355 .0495
 70.000 .0897 .0727 .0474
 80.000 .0507 .0366 .0462
 90.000 .0533 .0177 -.0352 -.0637 -.0622 .0000 -.0742 -.0739 -.0742 -.0748 -.0779 -.1054 -.0877
 100.000 .0872 -.0625 -.0778 -.0745 -.0751 -.0766 -.0807 -.0847 -.0892 -.0880
 110.000 -.0747 -.0760 -.0816 -.0813 -.0920 -.0974 -.1043 -.1125 -.1214
 120.000 -.0756
 130.000 -.1576
 140.000 -.2307
 150.000 -.2292
 160.000 -.2182
 170.000 -.2206
 180.000 -.2209 -.2109 -.1868 -.1657 -.1559 -.1488 -.1433 -.1344 -.1350 -.1173
 190.000

X/L

.4500 .4600 .4800 .5000 .5240 .5460 .5610 .5800 .6170 .6360 .6540 .6730 .6880 .7100

PMI

90.000 -.0659 -.0913 -.0960 -.0955 -.1013 -.1090 -.1150 .0000 -.1234 -.1281 -.1288 -.1286 -.1300
 100.000 -.0963 -.1053 -.1090 -.1072 -.1117 -.1196 -.1237 -.1293 -.1272 -.1362 -.1315 -.1294 -.1285
 110.000 -.1273 -.1282 -.1309 -.1315 -.1332 -.1421 -.1440 -.1470 -.1473 -.1494 -.1456 -.1420 -.1318
 120.000
 130.000 -.1980
 140.000 -.1323
 150.000 -.0922
 160.000 -.0766
 170.000 -.0679
 180.000 -.1067 -.0998 -.0839 -.0789 -.0759 -.0760 -.0745 -.0751 -.0721 -.0751 -.0751 -.0763 -.0754 -.0778 -.0820
 190.000

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

60.000
 70.000
 80.000
 90.000 -.1503 -.0901 -.1668 -.2022 -.2146 .0000
 100.000 -.1557 -.1560 -.1665 -.1661 -.1208 -.1172
 110.000 -.1378 -.1548 -.1354 -.0634 -.0333 -.0778
 120.000
 130.000
 140.000
 150.000
 160.000
 170.000
 180.000
 190.000
 200.000 -.1217 -.1363 -.0840 -.0631 .0051 .4296

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORDS)

MACH (2) = 2.021 ALPHA (6) = 17.070

SECTION 1 (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0670	.1260	.1840	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4210
PMI															
60.000	.1016	.0849	.0518												
70.000	.0975	.0876	.0432												
80.000	.0312	.0420	.0364												
90.000		.0366	.0074	.0546	-.0097	-.0837	-.0796	-.0800	-.0817	-.0819	-.1082	-.0896			
100.000					-.0903	-.0820	-.0784	-.0811	-.0825	-.0845	-.0881	-.0919			
110.000					-.0776	-.0802	-.0814	-.0855	-.0945	-.1007	-.1044	-.1071	-.0053	-.1130	
120.000					-.0763								.1784		
130.000					-.1580								-.2199		
140.000					-.2566								-.1856		
150.000					-.2563								-.1426		
160.000					-.2241								-.1260		
170.000					-.2265								-.1263		
180.000					-.2265	-.2121	-.1864	-.0685	-.1576	-.1477	-.1417	-.1328	-.1266	-.1151	

X/L	.4300	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
90.000	-.0872	-.0909	-.0943	-.0993	-.1006	-.1094	-.1149	-.1254	-.1320	-.1320	-.1410	-.1464	-.1524	.0000
100.000	-.0940	-.1026	-.1050	-.1044	-.1017	-.1103	-.1203	-.1251	-.1311	-.1281	-.1296	-.1302	-.1311	-.1383
110.000	-.1169	-.1210	-.1236	-.1266	-.1299	-.1379	-.1414	-.1444	-.1450	-.1431	-.1386	-.1293	-.1269	-.1291
120.000						-.1850							-.1185	
130.000						-.1985							-.1269	
140.000						-.1907							-.1575	
150.000						-.1134							-.1332	
160.000						-.0839							-.0968	
170.000						-.0722							-.0860	
180.000	-.1059	-.0946	-.0828	-.0789	-.0771	-.0782	-.0800	-.0831	-.0833	-.0868	-.0935	-.0944	-.0959	-.1009

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PMI									
60.000									
70.000									
80.000									
90.000	-.1775	-.1126	-.2144	-.2269	-.2296	.0000			
100.000	-.1806	-.1760	-.2147	-.1844	-.1539	-.1464			
110.000	-.1933	-.1707	-.1509	-.0964	-.0519	-.0976			
120.000						.0726			
130.000						.0577			
140.000						-.0683			
150.000						-.2484			
160.000						.2675			
170.000						.2463			
180.000	-.1333	-.1512	-.1080	-.1054	-.0509	.4370			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD) (5 OCT 73)

REFERENCE DATA

LSREF =	.0000 SQ. IN.	XMRP =	.0000 IN.
LSRF =	.0000 IN.	YMRP =	.0000 IN.
BRF =	.0000 IN.	ZMRP =	.0000 IN.
SCALE =	.0120 SCALE		

BETA	=	2.000	ELEVTR	=	-15.000
AILRON	=	.000	RUDDER	=	.000
RN/L	=	3.500			

PARAMETRIC DATA

MACH (1) = .6777 ALPHA (1) = 6.171

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2620	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI															
60.000	-.0408	-.0566	-.1315												
70.000	-.0040	-.0472	-.1465												
80.000	-.0113	-.0610	-.1523												
90.000			-.1773	-.3115	-.4003	-.2391	-.1606	.0000	-.1210	-.1432	-.1165	-.1005	-.0855	-.0773	-.1107
100.000						-.2273	-.1871	-.1710	-.1204	-.0992	-.0954	-.1018	-.0970	-.1334	-.0906
110.000						-.2646	-.2339	-.2124	-.1448	-.1230	-.1040	-.0970	-.0913	-.7275	-.0922
120.000						-.2737								-.9672	
130.000						-.3599								-.0731	
140.000						-.3221								-.0833	
150.000						-.2673								-.0779	
160.000						-.2356								-.0804	
170.000						-.2289								-.0836	
180.000						-.2209	-.1778	-.1566	-.1246	-.1024	-.0832	-.0792	-.0715	-.0750	-.0658
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100

[illegible][illegible]

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AWES 66-6311 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (1) = .800 ALPHA (1) = 6.171

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

130.0000 -.0433
140.0000 -.0530
150.0000 .0159
160.0000 .0922
170.0000 .1567
180.0000 -.0726 .0816 .1097 .1472 .2086 .1949

MACH (1) = .801 ALPHA (2) = 6.284

SECTION (1) FUSELAGE DEPENDENT VARIABLE CF

X/L .0870 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PHI

80.0000 -.0463 -.0422 -.1453
70.0000 .0012 -.0406 -.1424
60.0000 -.0276 -.0831 -.1504
90.0000 -.1702 -.3197 -.3912 -.2402 -.1765 .0000 -.1340 -.1781 -.1414 -.1359 -.1140 -.0855 -.1426
100.0000 -.2609 -.2189 -.1902 -.1420 -.1420 -.1241 -.1455 -.1213 -.1455 -.1213 -.1032 -.3497 -.1121
110.0000 -.2727 -.2502 -.2231 -.1730 -.1442 -.1346 -.1213 -.1032 -.3497 -.1121
120.0000 -.2845
130.0000 -.4084
140.0000 -.3395
150.0000 -.2708
160.0000 -.2264
170.0000 -.2360
180.0000 -.2382 -.1710 -.1481 -.1276 -.1069 -.0836 -.0778 -.0632 -.0715 -.0597
X/L .4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.0000 -.0893 -.1066 -.1098 -.0971 -.1000 -.1298 -.1203 .0000 -.1786 -.2112 -.2154 -.2602 -.2699 -.2486 .0000
100.0000 -.1169 -.1168 -.1301 -.1003 -.0987 -.1365 -.1580 -.1612 -.1470 -.2202 -.1944 -.2238 -.2331 -.2047 -.1703
110.0000 -.1130 -.1142 -.1190 -.1181 -.1031 -.1241 -.1570 -.1406 -.1574 -.1445 -.1896 -.2025 -.1770 -.1612 -.1232
120.0000 .0907
130.0000 -.0964
140.0000 -.0755
150.0000 -.0619
160.0000 -.0635
170.0000 -.0465
180.0000 -.0545 -.0818 -.0574 -.0625 -.0558 -.0513 -.0771 -.0658 -.0745 -.0793 -.0596 -.0632 -.0534 -.0196
X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

130.0000 -.0577
140.0000 -.0583
150.0000 -.0338
160.0000 -.0354
170.0000 -.0196
180.0000 -.0154 .0281

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(900) 334

MACH (1) = .631 ALPHA (2) = 8.264

SECTION (1) FUSELAGE

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PMI									
60.000							.1943		
70.000							.1218	.1655	.0000
80.000							.0937	.0885	.0534
90.000							.0755	.0505	.0164
100.000	-.1697	-.1280	-.0855	-.0347	.0137	.0000			
110.000	-.1196	-.0610	-.0129	.0031	-.0036	.0250			
120.000	-.0789	-.0052	.0507	.0552	.0196	-.0294			
130.000						-.0708			
140.000						-.0452			
150.000						-.0686			
160.000						.0281			
170.000						.1026			
180.000						.1636			
190.000	-.0013	.0632	.1050	.1465	.1949	.1936			

$$\text{MACH} (1) = .600 \quad \text{ALPHA} (3) = 10.350$$

SECTION (1) FUSELAGE DEFICIENT VARIABLE OF

X/L	.0070	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI															
60.000	-.0406	-.0391	-.1392												
70.000	-.0265	-.0308	-.1469												
80.000	-.0441	-.0614	-.1485												
90.000			-.1632	-.3297	-.3986	-.2644	-.2187	.0000	-.1530	-.2004	-.1866	-.1732	-.1362	-.1024	-.1677
100.000						-.2544	-.2331	-.2187	-.1815	-.1674	-.1453	-.1693	-.1515	-.1871	-.1480
110.000						-.2823	-.2706	-.2581	-.1972	-.1738	-.1642	-.1378	-.1276	-.2907	-.1387
120.000						-.2971								-.4196	
130.000						-.4213								-.1082	
140.000						-.3505								-.0859	
150.000						-.2884								-.0989	
160.000						-.2298								-.0843	
170.000						-.2506								-.0840	
180.000						-.2362	-.1786	-.1613	-.1363	-.1207	-.1037	-.0897	-.0668	-.0591	-.0369

[illegible]

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OA63

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AMES 66-63D PRESSURE VENTING - SHUTTLE ORBITER

(FEC006)

MACH (1) = .600 ALPHA (3) = 10.350

SECTION (1) FUSELAGE DEPENDENT VARIABLE CF

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
60.000															
100.000															
170.000															
180.000															
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PHI															
60.000															
70.000															
80.000															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

X/L	.0670	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
60.000															
70.000															
80.000															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

MACH (1) = .601 ALPHA (4) = 12.420

SECTION (1) FUSELAGE DEPENDENT VARIABLE CF

X/L	.0670	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
60.000															
70.000															
80.000															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

PHI

$$\text{MACH} (1) = .65; \quad \text{ALPHA} (4) = 12.425$$

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (REC0006)

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP													
X/L	.4500	.4600	.4660	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	-.1642	-.1638	-.1676	-.1698	-.1501	-.2022	-.2077	.0000	-.2644	-.3344	-.3196	-.3605	-.3670	-.3302	.0000
100.000	-.1816	-.2009	-.1825	-.1765	-.1688	-.2051	-.2277	-.2541	-.2203	-.3166	-.2696	-.3112	-.3218	-.2895	-.2536
110.000	-.1885	-.1971	-.1835	-.1965	-.1869	-.2149	-.2206	-.2135	-.2354	-.2399	-.2612	-.2722	-.2647	-.2104	-.1807
120.000					-.1380									-.1380	
130.000					-.1629									-.1638	
140.000					-.1329									-.1386	
150.000					-.0836									-.0922	
160.000					-.0458									-.0483	
170.000					-.0697									-.0432	
180.000	-.0602	-.0494	-.0704	-.0831	-.0885	-.0945	-.0865	-.0742	-.0961	-.0987	-.1022	-.0751	-.1003	-.0406	-.0026
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						

[illegible]

MACH (1) = .599 ALPHA (5) = 14.547

[illegible]

DATE 24 MAR 74

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (REC006)

MACH (1) = .599 ALPHA (5) = 14.543

SECTION 11 FUSELAGE

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100																																																																																																																					
1960	.1260	.1640	.2030	.2420	.2810	.3200	.3590	.3980	.4370	.4760	.5150	.5540	.5930	.6320	.6710	.7100	.7490	.7880	.8270	.8660	.9050	.9440	.9830	1.0220	1.0610	1.1000	1.1390	1.1780	1.2170	1.2560	1.2950	1.3340	1.3730	1.4120	1.4510	1.4900	1.5290	1.5680	1.6070	1.6460	1.6850	1.7240	1.7630	1.8020	1.8410	1.8800	1.9190	1.9580	1.9970	2.0360	2.0750	2.1140	2.1530	2.1920	2.2310	2.2700	2.3090	2.3480	2.3870	2.4260	2.4650	2.5040	2.5430	2.5820	2.6210	2.6600	2.6990	2.7380	2.7770	2.8160	2.8550	2.8940	2.9330	2.9720	3.0110	3.0500	3.0890	3.1280	3.1670	3.2060	3.2450	3.2840	3.3230	3.3620	3.4010	3.4400	3.4790	3.5180	3.5570	3.5960	3.6350	3.6740	3.7130	3.7520	3.7910	3.8300	3.8690	3.9080	3.9470	3.9860	4.0250	4.0640	4.1030	4.1420	4.1810	4.2200	4.2590	4.2980	4.3370	4.3760	4.4150	4.4540	4.4930	4.5320	4.5710	4.6100	4.6490	4.6880	4.7270	4.7660	4.8050	4.8440	4.8830	4.9220	4.9610	5.0000	5.0390	5.0780	5.1170	5.1560	5.1950	5.2340	5.2730	5.3120	5.3510	5.3900	5.4290	5.4680	5.5070	5.5460	5.5850	5.6240	5.6630	5.7020	5.7410	5.7800	5.8190	5.8580	5.8970	5.9360	5.9750	6.0140	6.0530	6.0920	6.1310	6.1700	6.2090	6.2480	6.2870	6.3260	6.3650	6.4040	6.4430	6.4820	6.5210	6.5600	6.5990	6.6380	6.6770	6.7160	6.7550	6.7940	6.8330	6.8720	6.9110	6.9500	6.9890	7.0280	7.0670	7.1060	7.1450	7.1840	7.2230	7.2620	7.3010	7.3400	7.3790	7.4180	7.4570	7.4960	7.5350	7.5740	7.6130	7.6520	7.6910	7.7300	7.7690	7.8080	7.8470	7.8860	7.9250	7.9640	8.0030	8.0420	8.0810	8.1200	8.1590	8.1980	8.2370	8.2760	8.3150	8.3540	8.3930	8.4320	8.4710	8.5100	8.5490	8.5880	8.6270	8.6660	8.7050	8.7440	8.7830	8.8220	8.8610	8.9000	8.9390	8.9780	9.0170	9.0560	9.0950	9.1340	9.1730	9.2120	9.2510	9.2900	9.3290	9.3680	9.4070	9.4460	9.4850	9.5240	9.5630	9.6020	9.6410	9.6800	9.7190	9.7580	9.7970	9.8360	9.8750	9.9140	9.9530	9.9920	10.0310	10.0700	10.1090	10.

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	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
4500	.4600	.4660	.4730	.4810	.4900	.5000	.5110	.5240	.5380	.5540	.5610	.5690	.5780	.5880	.5990	.6110	.6240	.6380	.6540	.6730	.6980	.7100																																																																																																													

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Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439
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	7280	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0A63

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AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (1) = .600 ALPHA (6) = 16.590

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	-.0964	-.0775	-.1149											
70.000	-.1133	-.0842	-.1703											
80.000	-.1431	-.1108	-.1760											
90.000		-.1815	-.4323	-.3398	-.2621	.0000	-.2634	-.2970	-.2823	-.2839	-.2390	-.1728	-.2892	
100.000				-.3008	-.3165	-.3204	-.2621	-.2500	-.2340	-.3108	-.2441	-.3169	-.2345	
110.000				-.3706	-.3840	-.3776	-.3274	-.3085	-.2756	-.2574	-.2488	-.2851	-.2425	
120.000				-.3949								-.3007		
130.000				-.5292								-.2081		
140.000				-.4057								-.1438		
150.000				-.2720								-.1461		
160.000				-.2934								-.1006		
170.000				-.2336								-.0939		
180.000				-.2218	-.1927	-.1627	-.1540	-.1297	-.1054	-.0840	-.0646	-.0646	-.0789	
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.2187	-.2685	-.2512	-.2484	-.2438	-.2856	-.2824	.0000	-.3771	-.4268	-.4599	-.4977	-.5364	.0000
100.000	-.2428	-.2754	-.2837	-.2672	-.2541	-.2929	-.2970	-.3134	-.2908	-.4252	-.3705	-.4299	-.4367	-.3371
110.000	-.2786	-.2685	-.2576	-.2481	-.2633	-.2913	-.2908	-.2747	-.2899	-.2853	-.3556	-.3724	-.3408	-.2545
120.000						-.2029							-.1981	
130.000						-.2737							-.2123	
140.000						-.2582							-.2401	
150.000						-.1468							-.1297	
160.000						-.0909							-.1016	
170.000						-.0686							-.0770	
180.000	-.0988	-.0969	-.0893	-.0756	-.0810	-.0961	-.1138	-.1258	-.1206	-.1200	-.1209	-.1113	-.1203	-.0120
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000							.0289							
70.000							-.0439	.0826	.0000					
80.000							-.0933	-.0121	.0235					
90.000	-.4161	-.3750	-.2995	-.2645	-.2385	.0000	-.1158	-.0567	-.0182					
100.000	-.3005	-.2556	-.2201	-.2150	-.2160	-.2115								
110.000	-.2108	-.1642	-.1251	-.1067	-.1723	-.2436								
120.000						-.2115								
130.000						-.1723								
140.000						-.2545								
150.000						-.0024								
160.000						.0961								
170.000						.1559								
180.000	-.2214	.0002	.0498	.0882	.1910	.1853								

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (2) = .731 ALPHA (1) = 6.307

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PMI

60.000 -.0196 -.0366 -.1447
 70.000 .0164 -.0225 -.1354
 80.000 .0165 -.0326 -.1366
 90.000 -.1724 -.3641 -.4580
 100.000 -.2520 -.1808 .0000 -.1338 -.1520 -.1264 -.1216 -.0705 -.0621 -.1089
 110.000 -.2575 -.2077 -.1800 -.1364 -.1113 -.0965 -.1092 -.0894 -.1146 -.0820
 120.000 -.2927 -.2475 -.2117 -.1523 -.1266 -.0973 -.0868 -.0778 -.4528 -.0794
 130.000 -.2964
 140.000 -.4143
 150.000 -.3898
 160.000 -.3998
 170.000 -.4024
 180.000 -.4011
 190.000 -.3948
 200.000 -.2096 -.1245 -.0841 -.0785 -.0606 -.0471 -.0460 -.0552 -.0481

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PMI

90.000 -.0660 -.0705 -.0700 -.0613 -.0584 -.0805 -.0786 .0000 -.1255 -.1818 -.2033 -.2495 -.2724 -.2663 .0000
 100.000 -.0755 -.0844 -.0857 -.0613 -.0679 -.0897 -.0935 -.1173 -.1162 -.1898 -.1729 -.2297 -.2383 -.2124 -.1798
 110.000 -.0747 -.0671 -.0636 -.0771 -.0763 -.0865 -.0892 -.1015 -.1210 -.1213 -.1657 -.1793 -.1836 -.1740 -.1321
 120.000 -.0747
 130.000 -.0660
 140.000 -.0804
 150.000 -.0460
 160.000 -.0484
 170.000 -.0407
 180.000 -.0424 -.0531 -.0421 -.0323 -.0395 -.0500 -.0615 -.0663 -.0682 -.0852 -.0695 -.0636 -.0396 -.0345 .0290

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

60.000 .1769
 70.000 .1238 .1595 .0000
 80.000 .0823 .0821 .0316
 90.000 .0549 .0468 .0002
 100.000 .0000
 110.000 -.1869 -.0945 -.0284 .0071 -.0091 .0055
 120.000 -.0675 -.0245 .0274 .0369 -.0075 -.0664
 130.000 -.1189
 140.000 -.0428
 150.000 -.0327
 160.000 .0491
 170.000 .1032
 180.000 .1655
 190.000 .2118
 200.000 .1014 .0668 .1164 .1629 .2060 .2118

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(RECORDS)

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

MACH (2) = .749 ALPHA (2) = 0.506

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
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PMI

60.000	-.0120	-.0396	-.1437												
70.000	.0143	-.0223	-.1321												
80.000	-.0011	-.0568	-.1472												
90.000				-.3447	-.4329	-.2042	-.2021	.0000	-.1544	-.1676	-.1525	-.1298	-.0952	-.0791	-.1202
100.000						-.2723	-.2257	-.2005	-.1777	-.1411	-.1261	-.1311	-.1086	-.1413	-.1134
105.000						-.2911	-.2630	-.2333	-.1811	-.1491	-.1107	-.1015	-.1166	-.3196	-.0934
110.000						-.3282								-.4551	
120.000						-.4451								-.0781	
130.000						-.4284								-.0741	
140.000						-.4194								-.0786	
150.000						-.4910								-.0633	
160.000						-.4258								-.0512	
170.000						-.5000	-.2723	-.1645	-.0882	-.0696	-.0609	-.0528	-.0501	-.0535	-.0326
180.000															

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PMI

90.000	-.0762	-.0858	-.0956	-.0765	-.0666	-.1077	-.1197	.0000	-.1709	-.2353	-.2739	-.3181	-.3397	-.3314	.0000
100.000	-.1092	-.1130	-.1212	-.1059	-.0874	-.1375	-.1230	-.1441	-.1644	-.2482	-.2314	-.2929	-.3119	-.2715	-.2230
110.000	-.1109	-.0969	-.0985	-.1051	-.1135	-.1222	-.1310	-.1444	-.1428	-.1658	-.2196	-.2464	-.2218	-.2253	-.1584
120.000						-.0872								-.1314	
130.000						-.0850								-.1180	
140.000						-.0967								-.1017	
150.000						-.0657								-.0728	
160.000						-.0651								-.0672	
170.000						-.0676								-.0530	
180.000	-.0450	-.0555	-.0562	-.0687	-.0621	-.0668	-.0833	-.0892	-.1090	-.1042	-.0939	-.1020	-.0749	-.0608	-.0042

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI

60.000							.1754		
70.000							.1185	.1614	.0000
80.000							.0652	.0819	.0443
90.000	-.2590	-.1435	-.0935	-.0440	-.0227	.0000	.0301	.0520	.0005
100.000	-.1991	-.0967	-.0392	-.0413	-.0262	-.0136			
110.000	-.1454	-.0466	-.0067	.0047	-.0285	-.0702			
120.000						-.1370			
130.000						-.0732			
140.000						-.0577			
150.000						.0406			
160.000						.1023			
170.000						.1638			
180.000	-.1339	.0442	.0690	.1266	.1919	.1995			

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(RECORD)

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

MACH (2) = .751 ALPHA (3) = 10.500

DEPENDENT VARIABLE CF

SECTION (1) FUSELAGE	X/L	.0870	.1280	.1640	.2030	.2420	.2640	.3010	.3190	.3360	.3370	.3750	.3940	.4050	.4310
PMI															
60.000		-.0309	-.0319	-.1242											
70.000		-.0346	-.0367	-.1256											
80.000		-.0117	-.0234	-.1248											
90.000					-.3519	-.4888	-.2834	-.2032	.0000	-.1639	-.2146	-.1804	-.1764	-.1368	-.0919
100.000							-.3047	-.2573	-.2366	-.1796	-.1631	-.1398	-.1724	-.1457	-.1199
110.000							-.3108	-.2852	-.2708	-.2181	-.1695	-.1273	-.1415	-.1273	-.1299
120.000							-.3508							-.3598	
130.000							-.4830							-.0943	
140.000							-.4816							-.0866	
150.000							-.5238							-.0763	
160.000							-.5644							-.0642	
170.000							-.5427							-.0613	
180.000							-.5901	-.3942	-.1968	-.1159	-.0852	-.0722	-.0507	-.0462	-.0569
X/L		.4500	.4680	.4660	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000		-.1085	-.1045	-.1229	-.1214	-.1134	-.1319	-.1370	.0000	-.2125	-.2821	-.3101	-.3701	-.3816	.0000
100.000		-.1352	-.1483	-.1483	-.1203	-.1293	-.1646	-.1686	-.1865	-.1798	-.3003	-.2871	-.3395	-.3666	-.2697
110.000		-.1266	-.1269	-.1258	-.1343	-.1319	-.1744	-.1576	-.1649	-.2029	-.2117	-.2509	-.2691	-.2761	-.1981
120.000							-.1343							-.1610	
130.000							-.1279							-.1323	
140.000							-.1259							-.1323	
150.000							-.0864							-.0996	
160.000							-.0810							-.0964	
170.000							-.0655							-.0922	
180.000		-.0560	-.0666	-.0741	-.0765	-.0821	-.0770	-.0918	-.0993	-.1022	-.1215	-.1312	-.1106	-.0788	-.0222
X/L		.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PMI															
60.000															
70.000															
80.000															
90.000		-.0956	-.1901	-.1245	-.1126	-.0795	.0000								
100.000		-.2255	-.1259	-.0830	-.0454	-.0870	-.0741								
110.000		-.1632	-.0622	-.0334	-.0340	-.0648	-.1244								
120.000							-.1729								
130.000							-.0957								
140.000							-.0781								
150.000							.0435								
160.000							.0960								
170.000							.1572								
180.000		-.1446	.0000	.0819	.1259	.1793	.1867								

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (2) = .752 ALPHA (4) = 12.610

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2810 .3200 .3590 .3980 .4370 .4760 .5150 .5540 .5930 .6320 .6710 .7100 .7490 .7880 .8270 .8660 .9050 .9440 .9830

PMI

60.000 -.0493 -.0379 -.1365
 70.000 -.0347 -.0286 -.1226
 80.000 -.0429 -.0326 -.1239
 90.000 -.1073 -.3228 -.4668 -.3337 -.2281 .0000 -.2046 -.2549 -.2139 -.2152 -.1762 -.1135 -.1996
 100.000 -.3312 -.2777 -.2676 -.2083 -.2143 -.1675 -.2019 -.1659 -.2239 -.1651
 110.000 -.3511 -.3057 -.3044 -.2567 -.1972 -.1884 -.1988 -.2310 -.1686
 120.000 -.3749
 130.000 -.5356
 140.000 -.5068
 150.000 -.5669
 160.000 -.6164
 170.000 -.5780
 180.000 -.6005 -.3470 -.0735 -.0606 -.0508 -.0600 -.0569 -.0611

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PMI

90.000 -.1448 -.1136 -.1633 -.1614 -.1327 -.1809 -.1840 -.2609 -.3288 -.3889 -.4263 -.4544 -.4300 .0000
 100.000 -.1838 -.1865 -.1917 -.1620 -.1464 -.1933 -.1936 -.2179 -.2350 -.3336 -.3317 -.3990 -.4044 -.3621 -.3025
 110.000 -.1832 -.1683 -.1659 -.1749 -.1704 -.1965 -.1946 -.2163 -.2125 -.2353 -.2771 -.3287 -.3196 -.2798 -.2432
 120.000 -.1417
 130.000 -.1749
 140.000 -.1554
 150.000 -.1172
 160.000 -.0934
 170.000 -.0920
 180.000 -.0732 -.0940 -.0800 -.0898 -.0776 -.1107 -.1041 -.1148 -.1268 -.1377 -.1355 -.1387 -.0951 -.0810 -.0285

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

60.000 .0801
 70.000 .0162 .1065 .0000
 80.000 -.0130 .0112 .0138
 90.000 -.3793 -.2504 -.2137 -.1755 -.1666 .0000
 100.000 -.2637 -.1856 -.1452 -.1385 -.1582 -.1388
 110.000 -.1862 -.0964 -.0995 -.0840 -.1343 -.1928
 120.000 -.2237
 130.000 -.1438
 140.000 -.1316
 150.000 .0165
 160.000 .0989
 170.000 .1484
 180.000 -.2124 -.0022 .0377 .1061 .1770 .1738

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OA63

PAGE 1191

MACH (2) = .754 ALPHA (3) = 14.720

APES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD06)

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2810	.3010	.3190	.3300	.3570	.3750	.3940	.4090	.4310
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PMI

60.000 -0.0647 -0.0281 -0.1238

70.000 -0.0837 -0.0526 -0.0937

80.000 -0.0607 -0.0458 -0.1296

90.000 -0.1304 -0.2938 -0.5150

100.000 -0.2383 -0.2497 -0.0000

110.000 -0.3523 -0.2989 -0.3232

120.000 -0.3716 -0.3603 -0.3617

130.000 -0.3995 -0.3995 -0.2715

140.000 -0.5511 -0.5511 -0.2512

150.000 -0.5215 -0.5215 -0.2466

160.000 -0.5861 -0.5861 -0.2428

170.000 -0.6497 -0.6497 -0.2349

180.000 -0.6267 -0.6267 -0.2560

190.000 -0.6512 -0.4932 -0.3058

200.000 -0.5460 -0.5240 -0.5980

210.000 -0.5610 -0.5610 -0.6170

220.000 -0.5460 -0.5460 -0.6360

230.000 -0.5240 -0.5240 -0.6540

240.000 -0.5090 -0.5090 -0.6730

250.000 -0.4880 -0.4880 -0.6940

260.000 -0.4680 -0.4680 -0.7130

270.000 -0.4480 -0.4480 -0.7310

280.000 -0.4280 -0.4280 -0.7490

290.000 -0.4080 -0.4080 -0.7670

300.000 -0.3880 -0.3880 -0.7850

310.000 -0.3680 -0.3680 -0.8030

320.000 -0.3480 -0.3480 -0.8210

330.000 -0.3280 -0.3280 -0.8390

340.000 -0.3080 -0.3080 -0.8570

350.000 -0.2880 -0.2880 -0.8750

360.000 -0.2680 -0.2680 -0.8930

370.000 -0.2480 -0.2480 -0.9110

380.000 -0.2280 -0.2280 -0.9290

390.000 -0.2080 -0.2080 -0.9470

400.000 -0.1880 -0.1880 -0.9650

410.000 -0.1680 -0.1680 -0.9830

420.000 -0.1480 -0.1480 -1.0010

430.000 -0.1280 -0.1280 -1.0190

440.000 -0.1080 -0.1080 -1.0370

450.000 -0.0880 -0.0880 -1.0550

460.000 -0.0680 -0.0680 -1.0730

470.000 -0.0480 -0.0480 -1.0910

480.000 -0.0280 -0.0280 -1.1090

490.000 -0.0080 -0.0080 -1.1270

500.000 0.0120 0.0120 -1.1450

510.000 0.0320 0.0320 -1.1630

520.000 0.0520 0.0520 -1.1810

530.000 0.0720 0.0720 -1.1990

540.000 0.0920 0.0920 -1.2170

550.000 0.1120 0.1120 -1.2350

560.000 0.1320 0.1320 -1.2530

570.000 0.1520 0.1520 -1.2710

580.000 0.1720 0.1720 -1.2890

590.000 0.1920 0.1920 -1.3070

600.000 0.2120 0.2120 -1.3250

610.000 0.2320 0.2320 -1.3430

620.000 0.2520 0.2520 -1.3610

630.000 0.2720 0.2720 -1.3790

640.000 0.2920 0.2920 -1.3970

650.000 0.3120 0.3120 -1.4150

660.000 0.3320 0.3320 -1.4330

670.000 0.3520 0.3520 -1.4510

680.000 0.3720 0.3720 -1.4690

690.000 0.3920 0.3920 -1.4870

700.000 0.4120 0.4120 -1.5050

710.000 0.4320 0.4320 -1.5230

720.000 0.4520 0.4520 -1.5410

730.000 0.4720 0.4720 -1.5590

740.000 0.4920 0.4920 -1.5770

750.000 0.5120 0.5120 -1.5950

760.000 0.5320 0.5320 -1.6130

770.000 0.5520 0.5520 -1.6310

780.000 0.5720 0.5720 -1.6490

790.000 0.5920 0.5920 -1.6670

800.000 0.6120 0.6120 -1.6850

810.000 0.6320 0.6320 -1.7030

820.000 0.6520 0.6520 -1.7210

830.000 0.6720 0.6720 -1.7390

840.000 0.6920 0.6920 -1.7570

850.000 0.7120 0.7120 -1.7750

860.000 0.7320 0.7320 -1.7930

870.000 0.7520 0.7520 -1.8110

880.000 0.7720 0.7720 -1.8290

890.000 0.7920 0.7920 -1.8470

900.000 0.8120 0.8120 -1.8650

910.000 0.8320 0.8320 -1.8830

920.000 0.8520 0.8520 -1.9010

930.000 0.8720 0.8720 -1.9190

940.000 0.8920 0.8920 -1.9370

950.000 0.9120 0.9120 -1.9550

960.000 0.9320 0.9320 -1.9730

970.000 0.9520 0.9520 -1.9910

980.000 0.9720 0.9720 -2.0090

990.000 0.9920 0.9920 -2.0270

1000.000 1.0120 1.0120 -2.0450

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC006)

MACH (3) = .891 ALPHA (1) = 6.476

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CF

X/L	.0870	.1260	.1640	.2030	.2420	.2810	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
PMI														
60.000	-.0035	-.0040	-.1133											
70.000	.0401	.0095	-.1162											
80.000	.0523	.0012	-.1125											
90.000		-.1253	-.3757	-.6678	-.3956	-.2011	.0000	-.1727	-.1798	-.1361	-.1211	-.0772	-.0623	-.0998
100.000					-.3623	-.2339	-.2209	-.1866	-.1549	-.1158	-.1131	-.0898	-.1161	-.0723
110.000					-.3557	-.2583	-.2857	-.2199	-.1730	-.1192	-.1103	-.0867	-.4521	-.0660
120.000					-.3770								-.5665	
130.000					-.4936								-.0480	
140.000					-.5567								-.0458	
150.000					-.6198								-.0312	
160.000					-.6333								-.0064	
170.000					-.6467								-.0064	
180.000					-.6533	-.5968	-.4963	-.3708	-.2635	-.1586	-.0616	-.0278	-.0046	.0085

X/L	.4300	.4680	.5060	.5440	.5820	.6170	.6360	.6540	.6730	.6880	.7100
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PMI

90.000	-.0823	-.0577	-.0802	-.0468	-.0346	-.0500	-.0434	.0000	-.0972	-.1614	-.1960	-.2468	-.3498	-.3644	.0000
100.000	-.0825	-.0896	-.0738	-.0529	-.0455	-.0719	-.0629	-.0915	-.0824	-.1676	-.1794	-.2560	-.3150	-.3155	-.2877
110.000	-.0863	-.0599	-.0631	-.0317	-.0429	-.0675	-.0760	-.0777	-.0945	-.1318	-.1735	-.2258	-.2456	-.2476	-.2250
120.000					-.0451	-.0645							-.1599		
130.000					-.0594								-.1150		
140.000					-.0390								-.1034		
150.000					-.0355								-.0809		
160.000					-.0310								-.0789		
170.000	-.0086	-.0089	-.0227	-.0234	-.0244	-.0397	-.0480	-.0367	-.0718	-.0930	-.1043	-.0962	-.0858	-.0666	-.0198

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI

60.000							.1715		
70.000							.0978	.1674	.0000
80.000							.0721	.0905	.0401
90.000	-.3651	-.1840	-.1368	-.0874	-.0726	.0200	.0190	.0486	.0016
100.000	-.3917	-.2204	-.0999	-.0581	-.0738	-.1149			
110.000	-.2179	-.1537	-.0458	-.0404	-.0813	-.1517			
120.000						-.2096			
130.000						-.0896			
140.000						-.0395			
150.000						.0447			
160.000						.0867			
170.000						.1446			
180.000	-.1980	-.0430	-.0969	-.1360	-.1608	-.1980			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MAC= (3) = .843 ALPHA (2) = 0.575

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4150	.4310
PHI															
90.000	.0026	-.0036	-.1036												
70.000	.0212	.0070	-.0972												
60.000	.0257	-.0124	-.0970												
50.000			-.1070	-.3475	-.6536	-.3914	-.2174	.0000	-.1936	-.2163	-.1833	-.1605	-.1183	-.0813	-.1269
100.000					-.4049	-.2480	-.2355	-.2056	-.1902	-.1340	-.1441	-.1161	-.1339	-.0974	
110.000					-.3983	-.2797	-.3074	-.2301	-.1948	-.1612	-.1220	-.1198	-.3163	-.0940	
120.000					-.3794								-.4458		
130.000					-.4464								-.0701		
140.000					-.5687								-.0627		
150.000					-.6366								-.0464		
160.000					-.6604								-.0345		
170.000					-.6678								-.0291		
180.000					-.6626	-.6036	-.5362	-.3932	-.2674	-.1835	-.0910	-.0276	-.0218	-.0047	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.0891	-.0860	-.0797	-.0570	-.0587	-.0833	-.0754	.0000	-.1356	-.2009	-.2461	-.3373	-.3997	-.4428	.0000
100.000	-.0915	-.0965	-.1016	-.0787	-.0667	-.1002	-.0950	-.1215	-.1244	-.2227	-.2275	-.3018	-.3687	-.3695	-.3769
110.000	-.0958	-.0962	-.0801	-.0797	-.0821	-.1023	-.1007	-.1121	-.1301	-.1660	-.2221	-.2724	-.2999	-.3179	-.2956
120.000						-.0716							-.2028		
130.000						-.0776							-.1847		
140.000						-.0898							-.1426		
150.000						-.0628							-.1260		
160.000						-.0524							-.1124		
170.000						-.0462							-.1154		
180.000	-.0116	-.0138	-.0257	-.0365	-.0347	-.0445	-.0702	-.0851	-.0994	-.1088	-.1116	-.1275	-.1181	-.1020	-.0541

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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Phi									
60.000							.1428		
70.000							.0814	.1401	.0000
80.000							.0345	.0686	.0217
90.000							.0016	.0286	-.0098
100.000	-.4540	.2478	-.1146	-.1295	-.1073	.0000			
110.000	-.361	-.2266	-.1330	-.0980	-.0987	-.1062			
120.000	-.2628	-.1357	-.0888	-.0750	-.1091	-.1868			
130.000						-.2038			
140.000						-.1284			
150.000						-.0655			
160.000						.0360			
170.000						.0268			
180.000						.1154			
190.000	-.2452	.0163	.0639	.1047	.1619	.1764			

MACM (3) = .091 ALPHA (4) = 12.750

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CF

X/L	.0070	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
60.000	-.0244	-.0009	-.0024												
70.000	-.0126	.0200	-.0717												
80.000	-.0141	.0173	-.0768												
90.000		-.0606	-.3029	-.5947	-.4576	-.2284	.0000	-.2426	-.2973	-.2411	-.2235	-.1891	-.1370	-.2037	
100.000					-.4678	-.2590	-.2992	-.2647	-.2603	-.2308	-.2481	-.2157	-.2362	-.1728	
110.000					-.4431	-.3007	-.3760	-.3039	-.2887	-.2399	-.2320	-.2013	-.2371	-.1660	
120.000					-.4110								-.2898		
130.000					-.4918								-.1148		
140.000					-.5822								-.1078		
150.000					-.6437								-.0856		
160.000					-.6345								-.0610		
170.000					-.6660								-.0325		
180.000					-.6569	-.6299	-.5574	-.4480	-.3220	-.2522	-.1782	-.0788	-.0727	-.0123	
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1555	-.1328	-.1445	-.1133	-.1265	-.1392	-.1202	.0000	-.1793	-.2632	-.3209	-.3937	-.5016	-.5407	.0000
100.000	-.1562	-.1699	-.1589	-.1309	-.1177	-.1601	-.1435	-.1640	-.1655	-.2768	-.2912	-.3778	-.4410	-.4612	-.5033
110.000	-.1643	-.1514	-.1455	-.1460	-.1484	-.1631	-.1427	-.1598	-.1801	-.2219	-.2786	-.3276	-.3603	-.4036	-.3609
120.000					-.1279								-.2412		
130.000					-.1501								-.2447		
140.000					-.1321								-.2368		
150.000					-.0759								-.1786		
160.000					-.0737								-.1645		
170.000					-.0539								-.1368		
180.000	-.0119	-.0360	-.0304	-.0675	-.0721	-.0651	-.0886	-.0930	-.1155	-.1375	-.1630	-.1633	-.1427	-.1437	-.0787
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PHI															
60.000							-.0240								
70.000							-.1284	.0231	.0000						
80.000							-.1779	-.0824	-.0179						
90.000	-.5732	-.3313	-.2329	-.2720	-.3161	.0000	-.1799	-.1039	-.0765						
100.000	-.4349	-.2915	-.2187	-.1874	-.2686	-.3305									
110.000	-.3171	-.2061	-.1099	-.1200	-.2161	-.3340									
120.000					-.3158										
130.000					-.1821										
140.000					-.1423										
150.000					-.0776										
160.000					-.0629										
170.000					-.1266										
180.000	-.5114	-.0638	.0224	.0670	.1513	.1533									

$$\text{MACH} (3) = .649 \quad \text{ALPHA} (3) = 14.850$$

JAMES 66-630 PRESSURE VENTING - SHUTTLE CARRIER

(REC'D)

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CF

X/L	.0873	.1260	.1640	.2030	.2420	.2840	.3280	.3750	.3940	.4030	.4310
PMI											
60.000	-.0504	-.0109	-.0683								
70.000	-.0307	-.0019	-.0668								
80.000	-.0496	-.0076	-.0651								
90.000		-.0639	-.2038	-.5773	-.4779	-.2646	-.0000	-.2581	-.3708	-.3019	-.3031
100.000					-.4738	-.2497	-.2862	-.3371	349	-.2832	-.2602
110.000					-.5203	-.3149	-.3777	-.4362	-.3659	-.3390	-.3000
120.000					-.4226						-.2846
130.000					-.4905						-.1530
140.000					-.5877						-.1273
150.000					-.6205						-.1430
160.000					-.6750						-.0811
170.000					-.6681						-.0850
180.000					-.6745	-.6386	-.5471	-.4869	-.4000	-.2635	-.1701
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540
PMI											
90.000	-.1905	-.1680	-.1472	-.1611	-.1614	-.2030	-.1659	.0000	-.2285	-.3099	-.4617
100.000	-.2000	-.1991	-.1629	-.1636	-.1599	-.1900	-.1823	-.2042	-.2012	-.3209	-.3141
110.000	-.2182	-.1736	-.1531	-.1780	-.1748	-.2018	-.1808	-.1994	-.2059	-.2444	-.3131
120.000						-.602					-.3255
130.000						-.1969					-.2325
140.000						-.1719					-.2781
150.000						-.1058					-.2600
160.000						-.0946					-.1415
170.000						-.0740					-.1780
180.000	-.0228	-.0116	-.0603	-.0752	-.0833	-.0857	-.0979	-.1031	-.1383	-.1618	-.1424
X/L	.7290	.7470	.7670	.7850	.8030	.8230	.8620	.9000	.9400		
PMI											
60.000							-.1600				
70.000							-.2413	-.0913	.0000		
80.000							-.3678	-.1985	-.0866		
90.000	-.6110	-.4929	-.3082	-.3208	-.4139	.0000	-.4093	-.2401	-.1391		
100.000	-.4946	-.3551	-.2469	-.2217	-.3311	-.4612					
110.000	-.3042	-.1946	-.1276	-.1427	-.2536	-.4538					
120.000						-.2870					
130.000						-.1733					
140.000						-.1770					
150.000						-.0330					
160.000						-.0568					
170.000						-.1025					
180.000	-.2936	-.0931	-.0014	.0537	.1131	.1242					

AMES 66-850 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (3) = .851 ALPHA (6) = 16.920

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0875 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.0000 -.0500 -.0223 -.0902
 70.0000 -.0676 -.0309 -.0870
 80.0000 -.0784 -.0174 -.0853
 90.0000 -.0769 -.2855 -.5881
 100.0000 -.4741 -.2486 .0000
 110.0000 -.4878 -.2474 -.3253
 120.0000 -.4794 -.3211 -.4166
 130.0000 -.4591
 140.0000 -.4941
 150.0000 -.5568
 160.0000 -.6616
 170.0000 -.6797
 180.0000 -.6689
 190.0000 -.6834
 200.0000 -.6748
 210.0000 -.5503
 220.0000 -.4093
 230.0000 -.2908
 240.0000 -.1854
 250.0000 -.1106
 260.0000 -.1203
 270.0000 -.0809

X/L

PHI

90.0000 -.2309 -.2083 -.2171
 100.0000 -.2382 -.2185 -.2073
 110.0000 -.2266 -.1839 -.1912
 120.0000 -.1813
 130.0000 -.1807
 140.0000 -.2098
 150.0000 -.2150
 160.0000 -.1349
 170.0000 -.0975
 180.0000 -.0824
 190.0000 -.0913
 200.0000 -.0807
 210.0000 -.0626
 220.0000 -.0422
 230.0000 -.0485
 240.0000 -.0422
 250.0000 -.0422
 260.0000 -.0422
 270.0000 -.0422
 280.0000 -.0422
 290.0000 -.0422
 300.0000 -.0422
 310.0000 -.0422
 320.0000 -.0422
 330.0000 -.0422
 340.0000 -.0422
 350.0000 -.0422
 360.0000 -.0422
 370.0000 -.0422
 380.0000 -.0422
 390.0000 -.0422
 400.0000 -.0422
 410.0000 -.0422
 420.0000 -.0422
 430.0000 -.0422
 440.0000 -.0422
 450.0000 -.0422
 460.0000 -.0422
 470.0000 -.0422
 480.0000 -.0422
 490.0000 -.0422
 500.0000 -.0422
 510.0000 -.0422
 520.0000 -.0422
 530.0000 -.0422
 540.0000 -.0422
 550.0000 -.0422
 560.0000 -.0422
 570.0000 -.0422
 580.0000 -.0422
 590.0000 -.0422
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 610.0000 -.0422
 620.0000 -.0422
 630.0000 -.0422
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 650.0000 -.0422
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 670.0000 -.0422
 680.0000 -.0422
 690.0000 -.0422
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 710.0000 -.0422
 720.0000 -.0422
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 790.0000 -.0422
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 850.0000 -.0422
 860.0000 -.0422
 870.0000 -.0422
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 890.0000 -.0422
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 920.0000 -.0422
 930.0000 -.0422
 940.0000 -.0422
 950.0000 -.0422
 960.0000 -.0422
 970.0000 -.0422
 980.0000 -.0422
 990.0000 -.0422
 1000.0000 -.0422

X/L

PHI

60.0000 -.1741
 70.0000 -.3454
 80.0000 -.4639
 90.0000 -.4916
 100.0000 -.5251
 110.0000 -.5251
 120.0000 -.4931
 130.0000 -.2881
 140.0000 -.1807
 150.0000 -.2181
 160.0000 -.0533
 170.0000 -.0739
 180.0000 -.1204
 190.0000 -.1008
 200.0000 -.0954
 210.0000 -.0954
 220.0000 -.0954
 230.0000 -.0954
 240.0000 -.0954
 250.0000 -.0954
 260.0000 -.0954
 270.0000 -.0954
 280.0000 -.0954
 290.0000 -.0954
 300.0000 -.0954
 310.0000 -.0954
 320.0000 -.0954
 330.0000 -.0954
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 350.0000 -.0954
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 440.0000 -.0954
 450.0000 -.0954
 460.0000 -.0954
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 480.0000 -.0954
 490.0000 -.0954
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 770.0000 -.0954
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 790.0000 -.0954
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 810.0000 -.0954
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 920.0000 -.0954
 930.0000 -.0954
 940.0000 -.0954
 950.0000 -.0954
 960.0000 -.0954
 970.0000 -.0954
 980.0000 -.0954
 990.0000 -.0954
 1000.0000 -.0954

AMES 66-63D PRESSURE VENTING - SHUTTLE ORBITER

(RECD06)

MAC (4) = .951 ALPHA (2) = 8.686

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0670 .1200 .1640 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PMI

60.000 .0426 .0337 -.0371
 70.000 .0787 .0716 -.0224
 80.000 .0633 .0346 -.0133
 90.000 -.0144 -.3106 -.5804 -.5770 -.4817 .0006 -.4241 -.4805 -.4539 -.2839 -.0204 -.0623 -.0628
 100.000 -.5749 -.5436 -.5161 -.4800 -.3562 -.3798 -.2371 -.0553 -.0623 -.0263
 110.000 -.6640 -.6181 -.5821 -.5333 -.5158 -.3039 -.1921 -.0779 -.2501 -.0219
 120.000 -.6930
 130.000 -.8649
 140.000 -.9341
 150.000 -.6810
 160.000 -.6769
 170.000 -.6331
 180.000 -.6222 -.4722 -.4362 -.4131 -.2683 -.1821 -.1494 -.0614 .0274

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PMI

90.000 -.0174 -.0070 -.0029 .0228 .0368 .0148 .0053 .0000 -.0027 -.0076 -.1325 -.2136 -.2962 -.3354 .0000
 100.000 -.0153 -.0233 -.0155 .0134 .0363 .0020 -.0202 -.0264 -.0264 -.1205 -.1181 -.1967 -.2617 -.2789 -.3766
 110.000 -.0034 .0044 .0086 .0228 .0288 .0057 -.0144 -.0158 -.0380 -.0730 -.1242 -.1730 -.2029
 120.000 .0175
 130.000 -.0114
 140.000 -.0015
 150.000 .0331
 160.000 .0338
 170.000 .0418
 180.000 .0779 .0832 .0712 .0475 .0168 .0040 -.0218 -.0431 -.0607 -.0815 -.0961 -.0973 -.0538

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

60.000 .0267
 70.000 -.0324 .1316 .0000
 80.000 -.0863 .0520 .0655
 90.000 -.4619 -.3846 -.3127 -.2947 -.3187 .0000 -.1513 .0054 .0125
 100.000 -.4165 -.3650 -.2231 -.2190 -.2411 -.3495
 110.000 -.3087 -.2174 -.1223 -.1413 -.2170 -.4251
 120.000 -.3569
 130.000 -.1610
 140.000 -.0379
 150.000 .0820
 160.000 .1582
 170.000 .2030
 180.000 -.3009 .0064 .0855 .1382 .2096 .2489

(RECORD)

APLS 66-630 PRESSURE SENSING - SHUTTLE ORBITER

MACH (4) = .949 ALPHA (4) = 12.860

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0870	.1260	.1640	.2030	.2420	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI														
60.000	.0139	.0459	-.0254											
70.000	.0337	.0372	-.0141											
80.000	.0316	.0710	.0001											
90.000		.0146	-.2603	-.5356	-.5305	-.4281	.0000	-.3298	-.3231	-.3564	-.3431	-.2690	-.3008	-.2189
100.000					-.5277	-.4723	-.3950	-.3465	-.3764	-.3847	-.3325	-.3092	-.3500	-.2109
110.000					-.5705	-.4828	-.4481	-.4256	-.4155	-.4056	-.3715	-.3378	-.3246	-.2020
120.000					-.5395								-.3106	
130.000					-.5356								-.2381	
140.000					-.6070								-.2592	
150.000					-.6128								-.2889	
160.000					-.6197								-.2532	
170.000					-.6086								-.2404	
180.000					-.6139	-.6391	-.6318	-.5987	-.5228	-.4681	-.3966	-.3149	-.2436	-.1603
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
90.000	-.1320	-.1173	-.0949	-.0679	-.0508	-.0579	-.0519	.0000	-.0932	-.1696	-.2162	-.3160	-.3817	-.4223
100.000	-.1411	-.1228	-.1228	-.0721	-.0510	-.0707	-.0742	-.0825	-.0777	-.1826	-.1920	-.2823	-.3394	-.4709
110.000	-.1505	-.1265	-.1071	-.0798	-.0689	-.0798	-.0747	-.0830	-.0986	-.1366	-.1867	-.2515	-.2828	-.3938
120.000						-.0412							-.2375	
130.000						-.0700							-.2273	
140.000						-.0566							-.2296	
150.000						-.0259							-.1920	
160.000						.0164							-.1584	
170.000						.0262							-.1426	
180.000	-.0945	-.0378	-.0011	.0143	.0281	.0189	.0006	-.0130	-.0368	-.0677	-.0850	-.1131	-.1380	-.1173
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PMI														
60.000							-.2004							
70.000							-.2907	-.0969	.0000					
80.000							-.3304	-.2323	-.0544					
90.000	-.5716	-.4977	-.5217	-.4360	-.4617	.0000	-.3371	-.3380	-.0932					
100.000	-.5744	-.5358	-.3774	-.3150	-.3815	-.4808								
110.000	-.5699	-.5247	-.2035	-.2360	-.2992	-.4300								
120.000						-.3346								
130.000						-.1410								
140.000						-.1064								
150.000						-.0009								
160.000						.0693								
170.000						.1180								
180.000	-.4129	-.0712	.0171	.0452	.1298	.1631								

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(RECORD)

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

MACH (4) = .951 ALPHA (5) = 14.96°

SECTION (1) FUSELAGE

DEPENDENT VARIABLE (P)
X/L .0870 .1260 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

80.000	.0024	.0463	-.0093										
90.000	.0137	.0628	-.0054										
100.000	.0127	.0736	-.0153										
110.000			.0339	-.2136	-.4937	-.4867	-.4320	.0000	-.3501	-.3838	-.4168	-.4446	-.3832
120.000						-.4892	-.4540	-.4320	-.3703	-.3916	-.4109	-.4537	-.3795
130.000						-.5623	-.5149	-.4633	-.4732	-.4906	-.5014	-.4879	-.4292
140.000						-.5976							-.3316
150.000						-.6620							-.2659
160.000						-.5873							-.2712
170.000						-.6098							-.2611
180.000						-.6403							-.2643
190.000						-.5988							-.2547
200.000						-.6442	-.6951	-.6759	-.6252	-.5745	-.5026	-.3793	-.2965
													-.2721
													-.1594
X/L	.4500	.4600	.4860	.5030	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730
													.6880
													.7100

PHI

90.000	-.2139	-.1425	-.0501	-.0492	-.0777	-.0642	-.0796	.0000	-.1289	-.1919	-.2473	-.3723	-.4405
100.000	-.2690	-.1220	-.0696	-.0588	-.0792	-.0859	-.0961	-.0843	-.1907	-.2126	-.3035	-.3739	-.4012
110.000	-.1878	-.0959	-.1060	-.0980	-.0823	-.0734	-.0762	-.0806	-.0919	-.1338	-.2005	-.2653	-.3021
120.000						-.0483							-.2556
130.000						-.0877							-.2459
140.000						-.0845							-.2623
150.000						-.0077							-.2285
160.000						.0221							-.1850
170.000						.0406							-.1744
180.000	-.0759	-.0496	.0087	.0307	.0401	.0283	.0152	-.0024	-.0338	-.0650	-.1029	-.1295	-.1621
190.000													-.1776
X/L	.7290	.7470	.7670	.7890	.8030	.8200	.8620	.9000	.9400				

PHI

80.000													
90.000													
100.000													
110.000													
120.000													
130.000													
140.000													
150.000													
160.000													
170.000													
180.000													
190.000													
200.000													
X/L	.4201	-.1077	-.0367	.0329	.1101	.1465							

AMES 66-637 PRESSURE VENTING - SHUTTLE ORBITER

(REC'D)

MACH (4) = .952 ALPHA (8) = 17.930

SECTION (1) FUSELAGE

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI															
60,000	-.0207	.0339	-.0145												
70,000	-.0225	.0445	-.0009												
80,000	-.0236	.0456	.0069												
90,000			.0261	-.1012	-.4752	-.4793	-.4149	.0000	-.3455	-.4075	-.4323	-.422	-.4151	-.3593	-.4479
100,000						-.4725	-.4382	-.3959	-.3721	-.3684	-.4021	-.4543	-.4595	-.4852	-.4005
110,000						-.5475	-.5092	-.4263	-.4190	-.4549	-.4888	-.5440	-.5260	-.4542	-.5055
120,000						-.6009								-.3870	
130,000						-.6552								-.2745	
140,000						-.6399								-.2689	
150,000						-.5856								-.2757	
160,000						-.6552								-.2666	
170,000						-.6547								-.2288	
180,000						-.6495	-.6617	-.6305	-.5912	-.5394	-.4813	-.3759	-.2941	-.2406	-.1406
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90,000	-.3802	-.1800	-.0852	-.0800	-.0925	-.1062	-.0907	.0000	-.1785	-.2934	-.3367	-.4163	-.5150	-.5719	.0000
100,000	-.2821	-.1684	-.0839	-.1073	-.1026	-.0996	-.0870	-.1078	-.1233	-.2467	-.2724	-.3531	-.4271	-.4590	-.5560
110,000	-.2235	-.1046	-.0643	-.1256	-.1112	-.1017	-.0817	-.0977	-.1261	-.1772	-.2301	-.2949	-.3379	-.3827	-.4646
120,000						-.0800								-.2896	
130,000						-.1016								-.2854	
140,000						-.1231								-.3078	
150,000						-.0406								-.2870	
160,000						-.0910								-.2380	
170,000						.0267								-.2225	
180,000	-.0807	-.0105	.0135	.0179	.0151	.0134	-.0165	-.0325	-.0720	-.1083	-.1321	-.1756	-.2026	-.2285	-.1901
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PMI															
60,000							-.3484								
70,000							-.3047	-.3482	.0000						
80,000							-.5662	-.6145	-.1581						
90,000	-.7000	-.6356	-.6021	-.6174	-.6105	.0000	-.5503	-.6210	-.2197						
100,000	-.6982	-.7028	-.5293	-.4483	-.4634	-.6187									
110,000	-.4612	-.4637	-.3116	-.3263	-.3749	-.5839									
120,000						-.3362									
130,000						-.1613									
140,000						-.1813									
150,000						-.0227									
160,000						.0607									
170,000						.1412									
180,000	-.4508	-.2088	-.0681	.0007	.1114	.1376									

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD06)

MACH (5) = 1.047 ALPHA (1) = 6.502

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .40 0 .4310

PHI

60.000 .1597 .1683 .0884
 70.000 .2077 .1915 .0998
 80.000 .2052 .1879 .1096
 90.000 .1034 -.1783 -.4116
 100.000
 110.000 -.4294 -.4225 -.3751 -.3476 -.3566 -.3674 -.3699 -.2861 -.2789 -.2022
 120.000 -.5142 -.4869 -.4546 -.4242 -.4386 -.4344 -.3079 -.2420 -.3736 -.1774
 130.000 -.5153
 140.000 -.7055
 150.000 -.7969
 160.000 -.7258
 170.000 -.6450
 180.000 -.5098
 190.000 -.3238 -.4176 -.3999 -.3753 -.3540 -.3011 -.2200 -.1460 -.1212 -.0780

X/L

PHI

60.000
 70.000
 80.000
 90.000
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X/L

PHI

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 720.000
 730.000
 740.000
 750.000
 760.000
 770.000
 780.000
 790.000
 800.000
 810.000
 820.000
 830.000
 840.000
 850.000
 860.000
 870.000
 880.000
 890.000
 900.000
 910.000
 920.000
 930.000
 940.000
 950.000
 960.000
 970.000
 980.000
 990.000
 1000.000

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (3) = 1.055 ALPHA (2) = 0.714

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
60.000	.1616	.1775	.1017												
70.000	.1864	.1985	.1165												
80.000	.1979	.1809	.1290												
90.000		.1351	-.1412	-.3873	-.3975	-.3239	.0000	-.2876	-.3351	-.3413	-.3622	-.3494	-.2452	-.3049	
100.000					-.3977	-.3476	-.3275	-.3385	-.3590	-.4026	-.3946		-.3904	-.2389	
110.000					-.4756	-.4436	-.4212	-.4015	-.4284	-.4440	-.4336	-.3041	-.3736	-.2090	
120.000					-.5001								-.3860		
130.000					-.6982								-.1646		
140.000					-.8256								-.1488		
150.000					-.7475								-.1303		
160.000					-.6639								-.1159		
170.000					-.5264								-.1088		
180.000					-.5304	-.4305	-.4115	-.3802	-.3540	-.2785	-.1864	-.1254	-.1018	-.0871	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
95.000	-.2174	-.1987	-.2129	-.1557	-.0517	.0842	.1014	.0000	.0826	.0260	-.0249	-.0772	-.1598	-.2020	.0000
100.000	-.2081	-.1967	-.1651	-.1464	-.0261	.0649	.0788	.0792	.0826	.0056	-.0694	-.1350	-.1570	-.2496	
110.000	-.1832	-.1565	-.1451	-.1329	-.0459	.0543	.0720	.0718	.0670	.0349	-.0149	-.0539	-.0964	-.1372	-.2105
120.000					.0410									-.0648	
130.000					.0547									-.0580	
140.000					.0646									-.0420	
150.000					.0687									-.0215	
160.000					.0642									-.0050	
170.000					.0666									-.0046	
180.000	-.0928	-.0572	-.0440	-.0345	-.0248	.0596	.0786	.0854	.0835	.0632	.0580	.0344	.0135	-.0010	-.0233

X/L	.7200	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI

60.000							.0366		
70.000							-.0322	.1631	.0000
80.000							-.0887	.0930	.1466
90.000	-.3247	-.2781	-.2428	-.1886	-.1999	.0000	-.1575	.0615	.1218
100.000	-.2892	-.2747	-.1417	-.0864	-.1506	-.2501			
110.000	-.2229	-.1519	-.0198	-.0109	-.0976	-.2873			
120.000						-.1133			
130.000						.0256			
140.000						.1074			
150.000						.2390			
160.000						.2739			
170.000						.5376			
180.000	-.2229	.0976	.2009	.2747	.3630	.5626			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC006)

MACM (3) = 1.095 ALPHA (3) = 10.780

SECTION (1) FUSELAGE DEFLECT VARIABLE CP

R/L	.0870	.1260	.1640	.2030	.2420	.2810	.3010	.3190	.3380	.3570	.3750	.3940	.4090	.4310
PMI														
60.000	.1479	.1034	.1153											
70.000	.1787	.2043	.1336											
80.000	.1843	.2145	.1449											
90.000			.1940	-.1159	-.3723	-.3762	-.3234	-.0000	-.2930	-.3516	-.3601	-.3446	-.2425	-.3721
100.000					-.3756	-.3759	-.3531	-.3312	-.3544	-.3616	-.4355	-.4043	-.4548	-.3269
110.000					-.4493	-.4370	-.4268	-.4109	-.4444	-.4743	-.4677	-.4432	-.4100	-.2584
120.000					-.4931								-.3983	
130.000					-.7029								-.1823	
140.000					-.8490								-.1611	
150.000					-.7782								-.1292	
160.000					-.6955								-.1074	
170.000					-.5530								-.0992	
180.000					-.5516	-.4759	-.4497	-.4109	-.3741	-.2820	-.1799	-.1149	-.0943	-.0605
R/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
90.000	-.3262	-.2731	-.2668	-.2062	.1368	.1071	.1216	.0000	.0870	.0271	-.0330	-.1025	-.1863	-.0000
100.000	-.2571	-.2532	-.2326	-.1755	.1167	.0899	.1018	.0834	.0887	.0033	-.0212	-.0954	-.1804	-.2808
110.000	-.2417	-.1659	-.1632	-.0755	.0748	.0638	.0846	.0740	.0721	.0331	-.0270	-.0854	-.1190	-.2308
120.000					.0636								-.0929	
130.000					-.0029								-.0899	
140.000					.0335								-.0808	
150.000					.0796								-.0581	
160.000					.0861								-.0345	
170.000					.0796								-.0360	
180.000	-.1827	-.0585	-.0274	.0162	.0942	.0868	.0931	.1029	.1010	.0806	.0526	-.0030	-.0337	.0165
R/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PMI														
60.000							-.0358							
70.000							-.0990	.0789	.0000					
80.000							-.1533	.0309	.1003					
90.000	-.3594	-.3120	-.3436	-.2357	-.2423	.0000	-.2572	-.0211	.0806					
100.000	-.3241	-.3711	-.2280	-.1270	-.1797	-.2994								
110.000	-.2522	-.2157	-.0706	-.0452	-.1272	-.3221								
120.000					-.1793									
130.000					-.0100									
140.000					.0423									
150.000					.2268									
160.000					.2657									
170.000					.3116									
180.000	-.2509	.0518	.1907	.2720	.3655	.4851								

AMES 68-630 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (5) = 1.045 ALPHA (4) = 12.880

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2810	.3200	.3590	.3980	.4370	.4760	.5150
PHI												
60.000	.1234	.1640	.1078									
70.000	.1400	.1834	.1217									
80.000	.1445	.1931	.1379									
90.000		.1309	-.1096	-.3702	-.3771	-.3176	.0000	-.2816	-.3038	-.3351	-.3566	-.2512
100.000					-.3766	-.3622	-.3408	-.3166	-.3327	-.3571	-.4082	-.4194
110.000					-.4468	-.4180	-.4159	-.3958	-.4299	-.4801	-.4937	-.3617
120.000					-.5087						-.4245	
130.000					-.7354						-.2338	
140.000					-.9058						-.1920	
150.000					-.8333						-.1424	
160.000					-.7411						-.1211	
170.000					-.6002						-.1082	
180.000					-.5882						-.1046	-.0683

X/L	.4500	.4680	.4860	.5050	.5240	.5430	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7000
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PHI

90.000	-.4073	-.3777	-.3367	-.2426	-.0526	.1274	.1107	.0800	.0573	-.0152	-.0774	-.1453	-.2118	-.2630	.0000
100.000	-.3711	-.3399	-.2661	-.2176	.0428	.1163	.0920	.0758	.0675	-.0381	-.0488	-.1216	-.1814	-.2004	-.3075
110.000	-.3056	-.2220	-.2002	-.1716	.0645	.0941	.0826	.0730	.0486	.0091	-.0434	-.1024	-.1345	-.1694	-.2537
120.000					.0758									-.0947	
130.000					-.0222									-.0936	
140.000					.0626									-.0998	
150.000					.1135									-.0634	
160.000					.1167									-.0393	
170.000					.1267									-.0214	
180.000	-.0579	-.0514	-.0126	.0370	.1065	.1263	.1233	.1127	.0884	.0611	.0421	.0125	-.0109	-.0331	-.0148

X/L	.7230	.7470	.7670	.7850	.8030	.8230	.8420	.9000	.9400
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PHI

60.000									
70.000									
80.000									
90.000	-.4046	-.3701	-.4226	-.3349	-.3347	.0000			
100.000	-.3638	-.3861	-.2942	-.2145	-.2507	-.3768			
110.000	-.2833	-.2634	-.1275	-.1108	-.1871	-.3929			
120.000						-.2115			
130.000						-.0419			
140.000						-.0029			
150.000						-.2298			
160.000						.2722			
170.000						.3166			
180.000	-.2807	-.0004	.1639	.2522	.3643	.4256			

AMES 68-630 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (5) = 1.048 ALPHA (5) = 14.980

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP													
X/L		.0870	.1260	.1640	.2030	.2420	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI															
60.000		.1042	.1579	.1099											
70.000		.1114	.1717	.1249											
80.000		.1157	.1598	.1387											
90.000			.1553	-.0872	-.3463	-.3521	-.2995	.0000	-.2672	-.3040	-.3365	-.3559	-.3406	-.2345	-.4249
100.000						-.3508	-.3421	-.3223	-.2976	-.3204	-.3482	-.3972	-.4045	-.4657	-.4329
110.000						-.4242	-.3950	-.3965	-.3838	-.4191	-.4490	-.4674	-.4865	-.4469	-.4471
120.000						-.4948								-.4336	
130.000						-.7289								-.3343	
140.000						-.9195								-.2102	
150.000						-.8625								-.1261	
160.000						-.7606								-.0942	
170.000						-.6208								-.0878	
180.000						-.5970	-.5192	-.4720	-.4120	-.3455	-.2449	-.1585	-.1031	-.0848	-.0478
X/L		.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5900	.5980	.6170	.6360	.6540	.6730	.7100
PHI															
90.000		-.3997	-.4100	-.3560	-.2543	-.1514	.1003	.1020	.0000	-.0004	-.0427	-.0674	-.1782	-.2676	-.3234
100.000		-.4444	-.3908	-.2816	-.1984	-.0503	.0980	.0990	.0434	.0319	-.0522	-.0369	-.1439	-.2186	-.2523
110.000		-.3535	-.2636	-.1944	-.1229	-.0079	.0933	.0937	.0591	.0287	.0054	-.0348	-.1101	-.1535	-.2087
120.000							.0571							-.1230	
130.000							-.0350							-.1151	
140.000							.0555							-.1366	
150.000							.1245							-.0975	
160.000							.1311							-.0674	
170.000							.1407							-.0588	
180.000		-.0367	-.0274	.0318	.0784	.1129	.1403	.1286	.1156	.0869	.0521	.0353	.0026	-.0281	-.0410
X/L		.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI															
60.000															
70.000															
80.000															
90.000		-.4500	-.4282	-.4827	-.4090	-.4104	.0000								
100.000		-.3803	-.4962	-.3521	-.2777	-.3254	-.4456								
110.000		-.3076	-.3226	-.1845	-.1629	-.2374	-.4683								
120.000							-.2328								
130.000							-.0724								
140.000							-.0562								
150.000							.2368								
160.000							.2783								
170.000							.3159								
180.000		-.3080	-.1404	.1454	.2389	.3713	.4551								

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER
(RECORD)

MACH (5) = 1.048 ALPHA (6) = 17.070

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .0826 .1434 .1039
 70.000 .0716 .1266 .1223
 80.000 .0765 .1395 .1342
 90.000 .1534 .0484 -.3250 -.3333 -.2822 .0000 -.2492 -.3135 -.3230 -.3422 -.3306 -.2149 -.4115
 100.000 -.3356 -.3192 -.2951 -.2788 -.3017 -.3292 -.3901 -.3935 -.4545 -.4227
 110.000 -.4078 -.3818 -.3788 -.3637 -.4039 -.4342 -.4583 -.4789 -.4513 -.4702
 120.000 -.4831
 130.000 -.7250
 140.000 -.9362
 150.000 -.8923
 160.000 -.7829
 170.000 -.6354
 180.000 -.6098 -.5338 -.4721 -.4010 -.3175 -.2076 -.1314 -.0666 -.0467 -.0166

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.3801 -.3920 -.4147 -.3045 -.1911 .0732 .1003 .0000 -.0124 -.1209 -.1738 -.2451 -.3311 -.3670 .0000
 100.000 -.4373 -.4156 -.5164 -.2016 -.0731 .1036 .1118 .0659 .0452 -.0966 -.1321 -.1850 -.2585 -.2881 -.3959
 110.000 -.3916 -.2459 -.1845 -.1011 -.0172 .0996 .1097 .0790 .0444 -.0341 -.1093 -.1510 -.1798 -.2241 -.3098
 120.000 .1606
 130.000 -.0440
 140.000 -.0096
 150.000 .1099
 160.000 .1231
 170.000 .1426
 180.000 -.0036 -.0123 .0564 .1002 .1266 .1430 .1284 .1109 .0778 .0342 .0083 -.0343 -.0667 -.0887 -.1013

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000
 70.000
 80.000
 90.000 -.5164 -.4935 -.5727 -.5065 -.5069 .0000
 100.000 -.4943 -.5587 -.4329 -.3618 -.4111 -.5325
 110.000 -.3481 -.3663 -.2563 -.2330 -.3043
 120.000 .2927
 130.000 .1167
 140.000 .1097
 150.000 .2374
 160.000 .2998
 170.000 .3411
 180.000 -.3441 -.2019 .1073 .2163 .3599 .4385

-.2457
 -.3374 -.1924 .0000
 -.4961 -.2705 -.0891
 -.5947 -.3556 -.1470

JAMES 68-690 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{ALPHA} = 1.298 \quad \text{ALPHA} = 6.579$$

SECTION / USEPAGE

X/L	.6875	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
60,000	.1722	.2032	.1341												
70,000	.2196	.2291	.1317												
80,000	.2277	.2260	.1635												
90,000			.1594	-.1128	-.3407	-.3629	-.2804	.0000	-.2322	-.2843	-.2802	-.3052	-.2984	-.2005	-.1560
100,000						-.3589	-.3446	-.3041	-.2742	-.2876	-.2988	-.3347	-.2796	-.2383	-.1112
110,000						-.4346	-.4066	-.3752	-.3515	-.3682	-.3639	-.3035	-.2216	-.3471	-.0752
120,000						-.4276								-.3811	
130,000						-.6092								-.1270	
140,000						-.6944								-.1264	
150,000						-.6231								-.0945	
160,000						-.5542								-.0836	
170,000						-.4166								-.0750	
180,000						-.4334	-.3395	-.3209	-.2977	-.2849	-.2657	-.2227	-.1414	-.0482	.0202
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90,000	-.0614	-.0363	-.0219	.1000	.1615	.1803	.2050	.0000	.1515	.1145	.0529	-.0038	-.0712	-.0996	.0000
100,000	-.0639	-.0394	-.0100	.0924	.1584	.1782	.1909	.1996	.1870	.1007	.0626	.0094	-.0468	-.0618	-.0842
110,000	-.0556	-.0151	.0194	.1149	.1449	.1631	.1822	.1948	.1736	.1236	.0639	.0189	-.0084	-.0401	-.0346
120,000						.1611								.0292	
130,000						.1488								.0401	
140,000						.1240								.0517	
150,000						.1608								.0701	
160,000						.1672								.0946	
170,000						.0707								.0909	
180,000	.0254	.0382	.0713	.1197	.1517	.1508	.1637	.1915	.1686	.1356	.1066	.0864	.0761	.1085	.1730
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PMI															
60,000							.1817								
70,000							.1006	.2555	.0300						
80,000							.0452	.1885	.2179						
90,000	-.1345	-.0474	-.0746	-.0655	-.0998	.0000	-.0107	.1552	.1879						
100,000	-.1336	-.1070	.0218	.0160	-.0553	-.1647									
110,000	-.0186	.0666	.1172	.0824	-.0323	-.2040									
120,000						-.0873									
130,000						.0985									
140,000						.1933									
150,000						.2853									
160,000						.3153									
170,000						.3937									
180,000	-.0134	.2455	.2930	.3412	.3787	.3572									

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(956234)

$$\text{MACH} (0) = 1.599 \quad \text{ALPHA} (2) = 8.679$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CF

X/L	.0070	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI															
60.000	.1749	.2090	.1496												
70.000	.2066	.2419	.1683												
80.000	.2206	.2246	.1873												
90.000			.1846	-.0748	-.3138	-.3340	-.2764	.0000	-.2250	-.2626	-.2738	-.2915	-.2797	-.1955	-.2032
100.000						-.3295	-.3201	-.2835	-.2593	-.2721	-.2946	-.3285	-.3229	-.3280	-.1468
110.000						-.3395	-.3792	-.3568	-.3341	-.3581	-.3802	-.3761	-.2332	-.3387	-.1293
120.000						-.4202								-.3632	
130.000						-.6148								-.0730	
140.000						-.7301								-.0640	
150.000						-.6652								-.0551	
160.000						-.6003								-.0232	
170.000						-.4636								-.0156	
180.000						-.4372	-.3635	-.3428	-.3172	-.2862	-.2275	-.1530	-.0703	-.0158	.0000
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7110
PHI															
90.000	-.1372	-.0914	-.0673	.0956	.1651	.1835	.2138	.0220	.1608	.1061	.0546	-.0132	-.0921	-.1351	.0000
100.000	-.1026	-.0873	-.0592	.1120	.1622	.1690	.1934	.1719	.1639	.0912	.0529	-.0045	-.0695	-.0621	-.1617
110.000	-.1005	-.0443	-.0320	.0772	.1473	.1601	.1812	.1746	.1435	.1214	.0472	.0104	-.0322	-.0754	-.1148
120.000						.1558								-.0014	
130.000						.1680								.0055	
140.000						.1755								.0271	
150.000						.2129								.0414	
160.000						.2074								.0543	
170.000						.2023								.0525	
180.000	.0375	.0485	.0801	.1242	.1682	.1942	.1990	.1775	.1637	.1408	.1165	.0911	.0715	.0604	.1098
X/L	.7290	.7470	.7670	.7850	.8030	.8230	.8620	.9000	.9400						
PHI															
60.000							.0242								
70.000							.0075	.2060	.0000						
80.000							-.0563	.1448	.1978						
90.000	-.2278	-.1859	-.1451	-.1196	-.1210	.0000	-.1107	.1016	.1713						
100.000	-.1966	-.2365	-.0648	-.0013	-.0766	-.1342									
110.000	-.1102	-.0625	.0309	.0647	-.0277	-.2231									
120.000						-.1025									
130.000						.0120									
140.000						.1533									
150.000						.2452									
160.000						.3195									
170.000						.3797									
180.000	-.1260	.1739	.2641	.3358	.4145	.4915									

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC066)

MACH (6) = 1.099 ALPHA (3) = 10.790

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0670 .1260 .1640 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4090 .4310

PMI

60.000 .2001 .2314 .1647
 70.000 .2200 .2521 .1800
 80.000 .2291 .2583 .1918
 90.000 .2076 -.0532 -.3026 -.3113 -.2404 .0000 -.2034 -.2495 -.2602 -.2769 -.2610 -.1502 -.2030
 100.000 -.1290 -.2976 -.2627 -.2412 -.2515 -.2790 -.3276 -.3182 -.3705 -.2078
 110.000 -.3829 -.3575 -.3321 -.3108 -.3433 -.3693 -.3761 -.3363 -.3604 -.1605
 120.000 -.4202
 130.000 -.6244
 140.000 -.7662
 150.000 -.6964
 160.000 -.6081
 170.000 -.4756
 180.000 -.4771 -.3873 -.3567 -.3102 -.2716 -.1823 -.0905 -.0322 -.0108 .0298

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PMI

90.000 -.2072 -.1443 -.1389 -.0786 .0989 .1601 .1860 .1402 .0821 .0400 -.0319 -.1015 -.1603 .0000
 100.000 -.1578 -.1297 -.1017 -.0725 -.0004 .1444 .1623 .1441 .1423 .0526 .0531 -.0188 -.0766 -.1119 -.2072
 110.000 -.1204 -.0702 -.0332 -.0262 .0602 .1245 .1537 .1408 .1282 .0848 .0481 -.0073 -.0440 .0323 .1617
 120.000 .1082
 130.000 .1189
 140.000 .1520
 150.000 .1483
 160.000 .1847
 170.000 .1937
 180.000 .0476 .0678 .0018 .0738 .1113 .1941 .1772 .1701 .1513 .1255 .1212 .0915 .0597 .0318 .0709

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

60.000 .0058
 70.000 -.0964 .1148 .0000
 80.000 -.1878 .0486 .1578
 90.000 -.2637 -.2688 -.2742 -.1846 -.0000 .2489 -.0069 .1398
 100.000 -.2199 -.2484 -.1700 -.0692 -.1239 -.2275
 110.000 -.1890 -.1574 -.0179 .0107 -.0571 -.2514
 120.000 -.0349
 130.000 .0641
 140.000 .1138
 150.000 .2488
 160.000 .1283
 170.000 .3785
 180.000 .1448 .0935 .2289 .3117 .4158 .4327

$$\text{MACH} (6) = 1.100 \quad \text{ALPHA} (5) = 15.040$$

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2
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PMI

60.000	.1755	.2330	.1873
70.000	.1939	.2498	.2003
80.000	.1902	.2419	.2161
90.000			.2330
100.000			
110.000			
120.000			
130.000			
140.000			
150.000			
160.000			
170.000			
180.000			

xx

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6750	.6880	.7100
PMI															
90.000	-.2891	-.2914	-.2342	-.1266	.0491	.1897	.1543	.0000	.0836	.0807	-.0042	-.1075	-.1949	-.2365	.0000
100.000	-.3185	-.2317	-.1444	-.0787	.1255	.1827	.1469	.1067	.1133	.0498	.0272	-.0756	-.1465	-.1665	-.2622
110.000	-.1976	-.1171	-.0568	.0082	.1492	.1658	.1492	.1197	.1011	.0904	.0263	-.0423	-.0892	-.1277	-.2000
120.000						.1445								-.0490	
130.000						.0397								-.0385	
140.000						.1199								-.0617	
150.000						.1844								-.0262	
160.000						.1954								.0018	
170.000						.2044								.0092	
180.000	.0867	.1179	.1728	.1920	.1976	.1985	.1906	.1768	.1481	.1160	.0935	.0647	.0373	.0154	.0199

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X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PMI									
60.000							-.0919		
70.000							-.2792	-.0315	.0000
80.000							-.3811	-.1415	.0640
90.000							-.4261	-.2904	.0491
100.000	-.3602	-.3116	-.4004	-.3249	-.1197	.0000			
110.000	-.3332	-.3473	-.2745	-.1958	-.2368	-.3624			
120.000	-.2383	-.2300	-.1091	-.0796	-.1664	-.3742			
130.000						-.1654			
140.000						.0012			
150.000						.0165			
160.000						.2939			
170.000						.3375			
180.000						.3666			
190.000	-.2309	-.0827	.2051	.2003	.4197	.5073			

AMES 68-830 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (8) = 1.120 ALPHA (6) = 17.000

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4090 .4310

PMI

60.000 .1666 .2266 .1877
 70.000 .1637 .2416 .2010
 80.000 .1651 .2055 .2146
 90.000 .0251 -.2335 -.2360 -.1960 .0000 -.1666 -.2378 -.2398 -.2673 -.2367 -.1198 -.3071
 100.000 -.2389 -.2316 -.2115 -.1972 -.2260 -.2531 -.3120 -.2934 -.3532 -.3211
 110.000 -.3076 -.2932 -.2835 -.3216 -.3547 -.3617 -.3808 -.3526 -.3475
 120.000 -.3617
 130.000 -.6152
 140.000 -.8188
 150.000 -.7752
 160.000 -.6599
 170.000 -.5259
 180.000 -.5014 -.4407 -.3830 -.3141 -.2336 -.1337 -.0311 .0323 .0578 .0696
 .4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6880 .7100

X/L

PMI

90.000 -.2063 -.3131 -.3364 -.2524 -.1648 -.0625 .1665 .0000 .0614 -.0408 -.1014 -.1746 -.2652 -.3083 .0000
 100.000 -.3358 -.3429 -.2692 -.1762 -.0952 .1822 .1329 .1141 -.0137 -.0638 -.1334 -.1948 -.2220 -.3071
 110.000 -.3213 -.2157 -.1506 -.1010 -.0106 .1761 .1473 .1130 .0560 -.0263 -.1019 -.1190 -.1593 -.2262
 120.000 .0894
 130.000 .0180
 140.000 .0229
 150.000 .1535
 160.000 .1643
 170.000 .1882
 180.000 .0364 .0335 .0555 .0919 .1412 .1990 .1859 .1742 .1411 .1031 .0706 .0307 -.0073 -.0319 -.0359
 .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

X/L

PMI

60.000 -.1925
 70.000 -.3077 -.1441 .0000
 80.000 -.4379 -.2574 -.0147
 90.000 -.4261 -.4032 -.4636 -.4202 -.4179 .0000 -.5398 -.5088 -.5172
 100.000 -.4115 -.4219 -.3674 -.2798 -.3235 -.4520
 110.000 -.2692 -.3027 -.1829 -.1515 -.2358
 120.000 -.2189
 130.000 -.0424
 140.000 -.0328
 150.000 .2424
 160.000 .3443
 170.000 .3766
 180.000 -.2661 -.1390 .1165 .2796 .4027 .4863

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

WACH (7) = 1.149 ALPHA (4) = 12.090

SECTION (1) FUSELAGE DEFENDENT VARIABLE CP

X/L	.0870	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4090	.4310
PHI															
80.000	.0949	.2067	.1672												
90.000	.1007	.2322	.2123												
80.000	.1336	.2964	.2248												
90.000			.2369	-.0928	-.2541	-.2710	-.2242	.0000	-.1078	-.2431	-.2481	-.2614	-.2583	-.1991	-.3242
100.000						-.2730	-.2654	-.2405	-.2210	-.2425	-.2622	-.3044	-.3085	-.3592	-.3400
110.000						-.3329	-.3175	-.3050	-.2914	-.3261	-.3440	-.3642	-.3804	-.3490	-.3680
120.000						-.3804								-.3468	
130.000						-.5798								-.2015	
140.000						-.7335								-.1777	
150.000						-.6727								-.1403	
160.000						-.6090								-.1173	
170.000						-.4903								-.1063	
180.000						-.4858	-.3871	-.3595	-.3334	-.3008	-.2342	-.1793	-.1211	-.1045	-.0651

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6753	.6880	.7100
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FMI															
90.000	-.3091	-.3208	-.3298	-.2655	-.2235	-.2149	-.1075	.0000	-.1360	-.0485	.0091	-.0642	-.1229	-.1708	.0000
100.000	-.3528	-.3218	-.2617	-.2255	-.1975	-.1909	-.1043	-.1806	-.1173	-.0645	.0288	-.0403	-.1044	-.1207	-.2116
110.000	-.2956	-.2365	-.2127	-.1979	-.1803	-.1713	-.1557	-.1496	-.1073	-.0231	.0230	-.0271	-.0691	-.0957	-.1657
120.000						-.1247								-.0267	
130.000						-.1959								-.0336	
140.000						-.1116								-.0263	
150.000						-.0515								.0196	
160.000						-.0432								.0447	
170.000						-.0342								.0545	
180.000	-.0484	-.0506	-.0196	-.0402	-.0340	-.0395	-.0503	-.0543	-.0802	-.0578	-.0275	.0258	.0565	.0590	.0743

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
80.000								.0914	
90.000								-.1453	.0570
100.000								-.2589	.0228
110.000								-.3026	.0300
120.000	-.2965	-.2500	-.3007	-.1843	-.1399	.0000			.1253
130.000	-.2807	-.3262	-.1546	-.0922	-.1247	-.2561			
140.000	-.2005	-.1637	-.0945	-.0999	-.0910	-.2652			
150.000						-.0718			
160.000						.0647			
170.000						.0444			
180.000						.3652			
190.000						.3849			
200.000	-.1169	.0497	.2677	.3518	.4225	.4807			

(RECORD)

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

MACH (P) = 1.149 ALPHA (S) = 15.010

SECTION 1 (FUSELAGE) DEPENDENT VARIABLE CP

X/L	.0070	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4030	.4310
PMI															
80.000	.0438	.1873	.1796												
90.000	.0423	.1725	.2136												
100.000	.0334	.2273	.225												
90.000	.2426	.0127	-.2402	-.2559	-.2103	.0000	-.1064	-.2375	-.2495	-.2634	-.2367	-.1961	-.3248		
100.000				-.2537	-.2507	-.2326	-.2150	-.2343	-.2378	-.3080	-.3076	-.3696	-.3402		
110.000				-.3134	-.3000	-.2961	-.2859	-.3215	-.3474	-.3642	-.3622	-.3536	-.4040		
120.000				-.3711											
130.000				-.5762											
140.000				-.7518											
150.000				-.6997											
160.000				-.6297											
170.000				-.5595											
180.000				-.4910	-.4133	-.3864	-.3462	-.3154	-.2401	-.1657	-.1195	-.1035	-.0611		

X/L	.4500	.4680	.4860	.5080	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
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PMI

90.000	-.3124	-.3298	-.3592	-.3428	-.3118	-.2638	-.2300	.0000	-.1923	-.1108	.0215	-.0620	-.1422	-.2346	.0000
100.000	-.3612	-.3064	-.3663	-.2974	-.2548	-.2352	-.2090	-.2019	-.1450	-.0078	.0308	-.0443	-.1193	-.2638	
110.000	-.3378	-.3436	-.2780	-.2496	-.2240	-.2030	-.1718	-.1655	-.1257	.0011	.0141	-.0175	-.0036	-.0373	-.2029
120.000						-.1532								-.0041	
130.000						-.2540								-.0001	
140.000						-.1436								-.0017	
150.000						-.0722								.0023	
160.000						-.0046								.0044	
170.000						-.0478								.0040	
180.000	-.0517	-.0567	-.0269	-.0475	-.0451	-.0404	-.0644	-.0637	-.0703	-.0455	.1519	.0585	.0375	.0405	.0459

X/L	.7200	.7470	.7670	.7850	.8030	.8200	.9000	.9400
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PMI

90.000								
100.000								
110.000								
120.000								
130.000								
140.000								
150.000								
160.000								
170.000								
180.000								

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC'D)

MACH (7) = 1.150 ALPHA (6) = 17.080

SECTION (1) FUSELAGE

DEPENDENT \ ABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PFI															
60.000	.0423	.0912	.1600												
70.000	.0014	.1055	.2152												
80.000	-.0700	.1347	.2349												
90.000			.2419	.0282	-.2262	-.2437	-.2019	.0000	-.1824	-.2307	-.2399	-.2590	-.2538	-.1966	-.3282
100.000					-.2433	-.2553	-.2224	-.2059	-.2232	-.2252	-.2502	-.2984	-.3050	-.3588	-.3436
110.000					-.3048	-.2869	-.2843	-.2771	-.3084	-.3380	-.3622	-.3806	-.3590	-.3590	-.4146
120.000					-.3690									-.3570	
130.000					-.5795									-.4602	
140.000					-.7675									-.2988	
150.000					-.7311									-.1526	
160.000					-.6490									-.1190	
170.000					-.5199									-.1044	
180.000					-.5019	-.4278	-.3923	-.3434	-.3020	-.2260	-.1634	-.1172	-.1044	-.0644	-.0644
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PFI															
90.000	-.3150	-.3304	-.3578	-.3458	-.3428	-.3098	-.2602	.0000	-.0908	-.0189	.0212	-.1235	-.2453	-.3036	.0000
100.000	-.3630	-.3868	-.3882	-.3596	-.3100	-.2599	-.2269	-.1803	-.0812	.0161	.0839	-.0573	-.1332	-.1671	-.2836
110.000	-.4236	-.3990	-.3480	-.3020	-.2309	-.2135	-.1722	-.1571	-.0336	.1425	.1192	.0475	-.0203	-.0885	-.1818
120.000						-.1657								.0204	
130.000						-.2815								.0095	
140.000						-.2004								-.0664	
150.000						-.0985								-.0284	
160.000						-.0534								.0122	
170.000						-.0601								.0168	
180.000	-.0819	-.0623	-.0347	-.0611	-.0649	-.0630	-.0522	-.0299	-.0411	.0671	.1333	.1134	.0726	.0122	.0887
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PFI															
60.000															
70.000															
80.000															
90.000	-.4295	-.3652	-.4575	-.3628	-.3390	.0000									
100.000	-.4367	-.4595	-.2953	-.2436	-.2782	-.3724									
110.000	-.2414	-.2048	-.1138	-.1156	-.1628	-.3609									
120.000						-.1602									
130.000						.0136									
140.000						-.0024									
150.000															
160.000															
170.000															
180.000	-.2202	-.0275	.2194	.3164	.4572	.4935									

$$\text{MACH} (0) = 1.249 \quad \text{ALPHA} (2) = 8.637$$

AMES 66-630) PRESSURE VENTING - SHUTTLE ORBITER

1953

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

[illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC006)

MACH (8) = 1.249 ALPHA (3) = 10.770

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PHI

60.000 .0936 .1014 .1214

70.000 .0930 .1090 .1397

80.000 .0808 .1199 .1981

90.000 .2502 .0452 .1690

100.000 .2247 .2242 .1859

110.000 .2247 .2294 .2053

120.000 .2768 .2753 .2695

130.000 .3011 .3011 .3011

140.000 .4797 .4797 .4797

150.000 .5935 .5935 .5935

160.000 .5463 .5463 .5463

170.000 .5026 .5026 .5026

180.000 .4334 .4334 .4334

190.000 .4177 .4177 .4177

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 .2541 .2717 .2867

100.000 .2924 .2986 .2363

110.000 .2630 .2278 .1975

120.000 .1598 .1598 .1598

130.000 .1135 .1135 .1135

140.000 .0874 .0874 .0874

150.000 .0492 .0492 .0492

160.000 .0435 .0435 .0435

170.000 .0386 .0386 .0386

180.000 .0484 .0484 .0484

190.000 .0468 .0468 .0468

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 .0532 .0532 .0532

70.000 .1730 .1730 .1730

80.000 .2231 .2231 .2231

90.000 .2510 .2510 .2510

100.000 .1061 .1061 .1061

110.000 .1787 .1787 .1787

120.000 .0189 .0189 .0189

130.000 .1085 .1085 .1085

140.000 .1649 .1649 .1649

150.000 .3487 .3487 .3487

160.000 .3876 .3876 .3876

170.000 .4098 .4098 .4098

180.000 .5019 .5019 .5019

190.000 .3002 .3002 .3002

.1303 .1303 .1303

.4088 .4088 .4088

.5019 .5019 .5019

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (REC006)

MACH (8) = 1.250 ALPHA (4) = 12.870

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2640 .3010 .3180 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .0860 .0902 .0893
 70.000 .0702 .1029 .1235
 80.000 .0921 .0939 .1503
 90.000 .2313 .0816 .1633
 100.000 .2070 .1751 .0900 .1578 .1996 .2047 .2216 .2147 .1813 .2713
 110.000 .2077 .2128 .1944 .1835 .1981 .2137 .2556 .2591 .2989 .2066
 120.000 .2583 .2565 .2538 .2462 .2748 .2913 .3040 .3192 .3028 .3422
 130.000 .2932 .4759 .6106 .5672 .5177 .4378 .4252 .3486 .3220 .3039 .2810 .2420 .1942 .1409 .1231 .0793
 140.000 .4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

X/L

PHI

90.000 .2580 .2735 .2986 .3203 .3453 .3673 .3930 .4200 .4480 .4760 .5040 .5320 .5600 .5880 .6160 .6440
 100.000 .2986 .3240 .3517 .3792 .4067 .4342 .4617 .4892 .5167 .5442 .5717 .5992 .6267 .6542 .6817 .7092
 110.000 .3433 .3708 .3983 .4258 .4533 .4808 .5083 .5358 .5633 .5908 .6183 .6458 .6733 .7008 .7283 .7558
 120.000 .3880 .4155 .4430 .4705 .4980 .5255 .5530 .5805 .6080 .6355 .6630 .6905 .7180 .7455 .7730 .8005
 130.000 .4327 .4602 .4877 .5152 .5427 .5702 .5977 .6252 .6527 .6802 .7077 .7352 .7627 .7902 .8177 .8452
 140.000 .4774 .5049 .5324 .5600 .5875 .6150 .6425 .6700 .6975 .7250 .7525 .7800 .8075 .8350 .8625 .8900
 150.000 .5221 .5496 .5771 .6046 .6321 .6596 .6871 .7146 .7421 .7696 .7971 .8246 .8521 .8796 .9071 .9346
 160.000 .5668 .5943 .6218 .6493 .6768 .7043 .7318 .7593 .7868 .8143 .8418 .8693 .8968 .9243 .9518 .9793
 170.000 .6115 .6390 .6665 .6940 .7215 .7490 .7765 .8040 .8315 .8590 .8865 .9140 .9415 .9690 .9965 .10240
 180.000 .6562 .6837 .7112 .7387 .7662 .7937 .8212 .8487 .8762 .9037 .9312 .9587 .9862 .10137 .10412 .10687

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 .0727 .2599 .2954 .2962 .0000 .2325 .2349 .0563 .0823 .0827 .3643 .3375 .3975 .4312 .5555
 70.000 .0727 .2599 .2954 .2962 .0000 .2325 .2349 .0563 .0823 .0827 .3643 .3375 .3975 .4312 .5555
 80.000 .0727 .2599 .2954 .2962 .0000 .2325 .2349 .0563 .0823 .0827 .3643 .3375 .3975 .4312 .5555
 90.000 .0727 .2599 .2954 .2962 .0000 .2325 .2349 .0563 .0823 .0827 .3643 .3375 .3975 .4312 .5555
 100.000 .0727 .2599 .2954 .2962 .0000 .2325 .2349 .0563 .0823 .0827 .3643 .3375 .3975 .4312 .5555
 110.000 .0727 .2599 .2954 .2962 .0000 .2325 .2349 .0563 .0823 .0827 .3643 .3375 .3975 .4312 .5555
 120.000 .0727 .2599 .2954 .2962 .0000 .2325 .2349 .0563 .0823 .0827 .3643 .3375 .3975 .4312 .5555
 130.000 .0727 .2599 .2954 .2962 .0000 .2325 .2349 .0563 .0823 .0827 .3643 .3375 .3975 .4312 .5555
 140.000 .0727 .2599 .2954 .2962 .0000 .2325 .2349 .0563 .0823 .0827 .3643 .3375 .3975 .4312 .5555
 150.000 .0727 .2599 .2954 .2962 .0000 .2325 .2349 .0563 .0823 .0827 .3643 .3375 .3975 .4312 .5555
 160.000 .0727 .2599 .2954 .2962 .0000 .2325 .2349 .0563 .0823 .0827 .3643 .3375 .3975 .4312 .5555
 170.000 .0727 .2599 .2954 .2962 .0000 .2325 .2349 .0563 .0823 .0827 .3643 .3375 .3975 .4312 .5555
 180.000 .0727 .2599 .2954 .2962 .0000 .2325 .2349 .0563 .0823 .0827 .3643 .3375 .3975 .4312 .5555

MACH (8) = 1.249 ALPHA (5) = 14.935

AMES 66-610 PRESSURE VENTING - SHUTTLE ORBITER

(955235)

SECTION (1) FUSELAGE

X/L	.0670	.1260	.1840	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
60.000	.0626	.0779	.0555												
70.000	.0456	.0763	.0649												
80.000	.0263	.0662	.1197												
90.000		.1094		.0736	-.1774	-.2025	-.1713	.0000	-.1509	-.1958	-.2040	-.2199	-.2114	-.1676	-.2710
100.000					-.2046	-.2042	-.1690	-.1727	-.1902	-.1902	-.2112	-.2339	-.2605	-.3017	-.2905
110.000					-.2530	-.2477	-.2473	-.2343	-.2646	-.2860	-.3067	-.3249	-.3046	-.3469	
120.000					-.2964								-.3102		
130.000					-.4815								-.2816		
140.000					-.6306								-.2234		
150.000					-.5917								-.1675		
160.000					-.5369								-.1459		
170.000					-.4449								-.1355		
180.000					-.4331	-.3579	-.3358	-.3113	-.2905	-.2458	-.2012	-.1490	-.1327	-.0911	
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
50.000	-.2582	-.2706	-.2549	-.2847	-.2806	-.2795	-.2526	.0000	-.2155	-.2055	-.1747	-.1869	-.2312	-.2489	.0000
100.000	-.2940	-.3064	-.3151	-.2938	-.2822	-.2580	-.2340	-.2092	-.1641	-.1847	-.1445	-.1463	-.1841	-.1790	-.2235
110.000	-.3622	-.3338	-.3096	-.2706	-.2329	-.2184	-.2016	-.1677	-.1590	-.1347	-.1323	-.1131	-.1380	-.1337	-.1663
120.000					-.1671								-.1094		
130.000					-.2593								-.1037		
140.000					-.1410								-.1241		
150.000					-.0668								-.0707		
160.000					-.0613								-.0460		
170.000					-.0570								-.0389		
180.000	-.0836	-.0768	-.0386	-.0577	-.0621	-.0509	-.0660	-.0660	-.0684	-.0676	-.0566	-.0560	-.0435	-.0380	-.0144
X/L	.7290	.7470	.7670	.7890	.8030	.8230	.8620	.9000	.9400						
PMI															
60.000							-.1270								
70.000							-.3368	-.1254	.0000						
80.000							-.3812	-.3541	-.0124						
90.000	-.3221	-.2143	-.3936	-.3528	-.3061	.0000	-.3418	-.4107	-.1002						
100.000	-.3256	-.3420	-.3959	-.2089	-.2188	-.2762									
110.000	-.2147	-.3010	-.1517	-.0956	-.1424	-.2732									
120.000						-.0760									
130.000						.0571									
140.000						.0083									
150.000						.3714									
160.000						.4129									
170.000						.4111									
180.000	-.1975	-.2235	-.0357	-.2920	.4339	.5814									

AMES 60-630 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (9) = 1.250 ALPHA (6) = 17.040		DEPENDENT VARIABLE CP											
SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP											
X/L		.0790	.1260	.1640	.2030	.2420	.2820	.3210	.3600	.3990	.4380	.4770	.5160
PHI													
60.000		.0617	.0588	.0524									
70.000		.0771	.0528	.0456									
80.000		.0712	.0291	.0744									
90.000		.1169	.0870	.1164	.10870	.11875	.11645	.10000	.1448	.11940	.12144	.12024	.11417
100.000						.11465	.11936	.11773	.11550	.11804	.12468	.12483	.12947
110.000						.12378	.12350	.12313	.12227	.12375	.12397	.13163	.12978
120.000						.12906							.13022
130.000						.14739							.13376
140.000						.16400							.12464
150.000						.18071							.11759
160.000						.19497							.14452
170.000						.20479							.11318
180.000						.21327	.13684	.13453	.13165	.12924	.12451	.11925	.11297
X/L		.4500	.4880	.4980	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540
PHI													
90.000		.2303	.2482	.2722	.2670	.2836	.3171	.2879	.3000	.2948	.2548	.2491	.2838
100.000		.2648	.2981	.3044	.3010	.3048	.3108	.2777	.2477	.1932	.2141	.1774	.1962
110.000		.3465	.3392	.3365	.3257	.2936	.2600	.2201	.1977	.1715	.1519	.1151	.1142
120.000						.1901							.10991
130.000						.12895							.10950
140.000						.12156							.11523
150.000						.11140							.11172
160.000						.10858							.11693
170.000						.10732							.11627
180.000		.10848	.10703	.10367	.10649	.10622	.10021	.10734	.10766	.10848	.10879	.10742	.10574
X/L		.7290	.7470	.7670	.7850	.8030	.8230	.8620	.9000	.9400			
PHI													
60.000													
70.000													
80.000													
90.000		.4129	.4226	.4745	.4415	.4704	.4001						
100.000		.4113	.4226	.4704	.42425	.42693	.41334						
110.000		.2893	.2843	.1964	.1442	.1345	.13248						
120.000						.11454							
130.000						.1210							
140.000						.11445							
150.000						.13545							
160.000						.4302							
170.000						.4113							
180.000		.2321	.1145	.1083	.2131	.4145	.6144						

AMES 6A-030 PRESSURE VENTING - SHUTTLE ORBITER

(PECO06)

MACH (3) = 1.399 ALPHA (2) = 0.562

SECTION (1) FUSELAGE

DIFFERENT VARIABLE CP

X/L	.0070	.1200	.1840	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4130	.4310
PMI															
80.0000	.1121	.1113	.0817												
90.0000	.1217	.1226	.0813												
00.0000	.1228	.1236	.1117												
90.0000	.1692	.0657	-.1391	-.1591	-.1813	-.1562	.0000	-.1344	-.1708	-.1678	-.1776	-.1668	-.1765	-.1580	
100.0000					-.1766	-.1932	-.1755	-.1614	-.1727	-.1845	-.2031	-.2006	-.2270	-.2104	
110.0000					-.2354	-.2271	-.2337	-.2126	-.2277	-.2354	-.2420	-.2454	-.2396	-.2141	
120.0000					-.2350								-.2506		
130.0000					-.3789								-.1514		
140.0000					-.4338								-.1514		
150.0000					-.4139								-.1568		
160.0000					-.3945								-.1626		
170.0000					-.3749								-.1701		
180.0000					-.3523	-.2751	-.2433	-.2388	-.2327	-.2137	-.2038	-.1815	-.1664	-.1179	

X/L	.4500	.4800	.4860	.5030	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6900	.7170
PMI															
90.0000	-.1637	-.1926	-.1980	-.1699	-.1581	-.1637	-.1512	.0000	-.1314	-.1190	-.0767	-.0769	-.1123	-.1279	.0000
100.0000	-.2040	-.2012	-.1769	-.1606	-.1482	-.1546	-.1510	-.1569	-.1158	-.1238	-.0777	-.0676	-.0622	-.1114	-.1301
110.0000	-.1928	-.1699	-.1378	-.1581	-.1525	-.1471	-.1333	-.1194	-.1080	-.0987	-.0818	-.0659	-.0537	-.0254	-.1162
120.0000						-.0570							-.0463		
130.0000						-.0668							-.0647		
140.0000						-.1725							-.0450		
150.0000						-.0550							-.0455		
160.0000						-.0233							-.0406		
170.0000						-.0466							-.0478		
180.0000	-.0924	-.0830	-.0594	-.0689	-.0607	-.0542	-.0592	-.0537	-.0596	-.0592	-.0517	-.0554	-.0516	-.0465	-.0241

X/L	.7290	.7470	.7670	.7950	.8030	.8290	.8620	.9000	.9400
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PMI									
80.0000									
90.0000									
00.0000									
90.0000	-.1746	-.0789	-.2124	-.1810	-.1137	.0000	-.1702	-.2431	.0000
100.0000	-.1751	-.1837	-.2113	-.0740	-.0600	-.1161			
110.0000	-.1249	-.1659	-.0564	.0196	-.0075	-.0309			
120.0000						.1396			
130.0000						.1581			
140.0000						.2133			
150.0000						.1261			
160.0000						.1737			
170.0000						.4143			
180.0000	-.1126	-.1279	.0693	.2320	.3324	.4245			

AMES 66-430 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (9) = 1.399 ALPHA (3) = 10.640

SECTION 11 FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1200	.1640	.2030	.2420	.2640	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI														
60.000	.1093	.0991	.0529											
70.000	.1012	.1036	.0682											
80.000	.0932	.1083	.0697											
90.000		.1293	.0904	-.1204	-.1652	-.1409	.0000	-.1213	-.1369	-.1509	-.1658	-.1593	-.1668	-.2026
100.000					-.1680	-.1729	-.1584	-.1458	-.1371	-.1679	-.1965	-.1974	-.2159	-.2159
110.000					-.2102	-.2057	-.2087	-.1969	-.2187	-.2317	-.2391	-.2491	-.2333	-.2620
120.000					-.2227								-.2427	
130.000					-.3732								-.1766	
140.000					-.4680								-.1659	
150.000					-.4309								-.1576	
160.000					-.4038								-.1573	
170.000					-.3814								-.1550	
180.000					-.3628	-.2878	-.2564	-.2486	-.2456	-.2183	-.2047	-.1738	-.1524	-.1121
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
90.000	-.1916	-.2050	-.2238	-.2133	-.2185	-.2099	-.1932	-.1655	-.1482	-.1150	-.1080	-.1327	-.1618	.0000
100.000	-.2231	-.2453	-.2444	-.2151	-.1947	-.1823	-.1803	-.1700	-.1445	-.1552	-.1059	-.0947	-.1164	-.1726
110.000	-.2712	-.2464	-.2088	-.1878	-.1765	-.1677	-.1563	-.1485	-.1328	-.1229	-.1057	-.0856	-.0917	-.1425
120.000					-.1320								-.0643	
130.000					-.1115								-.1008	
140.000					-.0986								-.0706	
150.000					-.0574								-.0544	
160.000					-.0519								-.0508	
170.000					-.0470								-.0434	
180.000	-.0959	-.0687	-.0617	-.0722	-.0630	-.0523	-.0580	-.0584	-.0574	-.0637	-.0586	-.0531	-.0458	-.0393
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PMI														
60.000														
70.000														
80.000														
90.000	-.2091	-.0692	-.2454	-.2411	-.1688	.0000	-.1963	-.1228	.0000					
100.000	-.2074	-.2119	-.2435	-.1219	-.1124	-.1469	-.2190	-.2326	.0124					
110.000	-.1568	-.2024	-.1045	-.0108	-.0458	-.1478	-.2091	-.2625	-.0982					
120.000						.0252								
130.000						.1369								
140.000						.1620								
150.000						.3437								
160.000						.5949								
170.000						.2340								
180.000	-.1281	-.0533	-.0161	.2343	.3740	.5249								

AMES 66-63D PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (9) = 1.399 ALPHA (4) = 12.730

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.0946	.0692	.0453											
70.000	.0771	.0903	.0543											
80.000	.0713	.0632	.0673											
90.000		.1084	.0779	-.1203	-.1489	-.1287	.0000	-.1108	-.1462	-.1430	-.1373	-.1344	-.1695	-.2044
100.000					-.1499	-.1801	-.1468	-.1349	-.1457	-.1573	-.1888	-.1922	-.2271	-.2218
110.000					-.1906	-.1933	-.1987	-.1871	-.2112	-.2236	-.2340	-.2484	-.2312	-.2715
120.000					-.2128								-.2375	
130.000					-.3738								-.1950	
140.000					-.4832								-.1789	
150.000					-.4514								-.1619	
160.000					-.4224								-.1577	
170.000					-.3900								-.1561	
180.000					-.3700	-.2942	-.2665	-.2547	-.2415	-.2178	-.2034	-.1712	-.1577	-.1145

X/L	.4500	.4680	.4680	.5050	.5240	.5460	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PHI

90.000	-.1969	-.2067	-.2231	-.2160	-.2280	-.2439	-.2461	.0000	-.2016	-.1733	-.1457	-.1367	-.1580	.0000
100.000	-.2314	-.2325	-.2510	-.2439	-.2449	-.2492	-.2324	-.2029	-.1710	-.1750	-.1301	-.1118	-.1202	-.2022
110.000	-.2527	-.2791	-.2701	-.2439	-.2215	-.2167	-.1936	-.1712	-.1516	-.1392	-.1151	-.1103	-.0955	-.1646
120.000					-.1436								-.0854	
130.000					-.1691								-.1204	
140.000					-.1064								-.0921	
150.000					-.0636								-.0700	
160.000					-.0535								-.0546	
170.000					-.0472								-.0558	
180.000	-.0979	-.0689	-.0529	-.0645	-.0569	-.0541	.79	-.0611	-.0663	-.0750	-.0664	-.0590	-.0554	-.0489

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI

60.000							-.1364		
70.000							-.2404	-.1831	.0000
80.000							-.2604	-.2820	-.0557
90.000	-.2425	-.0974	-.2961	-.3038	-.2291	.0000	-.2470	-.2824	-.2884
100.000	-.2427	-.2431	-.2964	-.1727	-.1557	-.2007			
110.000	-.1791	-.2274	-.1567	-.0535	-.0637	-.1880			
120.000					-.0006				
130.000					.1008				
140.000					.1737				
150.000					.3629				
160.000					.4041				
170.000					.3905				
180.000	-.1683	-.1752	-.0550	.2265	.3811	.6120			

AMES 06-030 PRESSURE VENTING - SHUTTLE ORBITER

(PFC006)

MACH (5) = 1.400 ALPHA (5) = 14.730

SECTION 1 (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1200	.1640	.2030	.2420	.2640	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
PMI														
00.000	.0048	.0713	.0441											
05.000	.0505	.0685	.0428											
00.000	.0327	.0541	.0531											
00.000		.0656	.0443	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050
100.000				.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050
110.000				.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050
120.000				.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050
130.000				.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050
140.000				.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050
150.000				.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050
160.000				.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050
170.000				.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050
180.000				.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050
X/L	.4500	.4600	.4660	.5030	.5240	.5460	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
90.000	.1064	.1987	.2216	.2101	.2304	.2439	.2453	.2371	.2158	.1846	.1736	.1893	.2145	.2000
100.000	.2213	.2407	.2462	.2467	.2532	.2737	.2666	.2422	.1984	.1490	.1452	.1420	.1621	.2158
110.000	.2915	.2771	.2804	.2854	.2743	.2593	.2258	.1976	.1636	.1346	.1333	.1153	.1356	.1756
120.000						.1799							.0934	
130.000						.2619							.1186	
140.000						.1395							.1346	
150.000						.0773							.0907	
160.000						.0635							.0737	
170.000						.0521							.0604	
180.000	.0098	.0011	.0509	.0695	.0596	.0571	.0636	.0709	.0769	.0824	.0879	.0901	.0901	.0705
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PMI														
00.000							.1763							
05.000							.1349	.2094	.0000					
00.000							.13636	.13660	.0000					
00.000							.13147	.13182	.13184					
90.000	.2807	.1127	.3534	.3689	.3120	.0740								
100.000	.2807	.2856	.2550	.2332	.2151	.2644								
110.000	.2150	.2838	.1767	.0950	.1236	.2435								
120.000						.0236								
130.000						.0666								
140.000						.0708								
150.000						.1637								
160.000						.4034								
170.000						.3354								
180.000	.1059	.2029	.0690	.1424	.3778	.6743								

JAMES 66-6311 PRESSURE VENTING - SHUTTLE ORBITER

(REC'D)

MACH (9) = 1.403 ALPHA (6) = 16.877

SECTION (1) FUSELAGE

K/L	.0070	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4020	.4310
FMI															
60.000	.0730	.0557	.0336												
70.000	.0185	.0468	.0336												
80.000	-.0074	.0236	.0277												
90.000			.0401	.0221	-.0070	-.1313	-.1106	.0000	-.1010	-.1336	-.1349	-.1321	-.1504	-.1378	-.1699
100.000						-.1253	-.1482	-.1349	-.1160	-.1227	-.1392	-.1021	-.1019	-.2065	-.2034
110.000						-.1718	-.1714	-.1759	-.1609	-.1892	-.2074	-.2224	-.2378	-.2171	-.2552
120.000						-.2095								-.2239	
130.000						-.3642								-.3298	
140.000						-.5067								-.2572	
150.000						-.4816								-.1797	
160.000						-.4456								-.1519	
170.000						-.3923								-.1401	
180.000						-.3758	-.3070	-.2855	-.2741	-.2572	-.2330	-.2073	-.1651	-.1446	-.1157
K/L	.4500	.4680	.4680	.5050	.5240	.5460	.5610	.5890	.5980	.6170	.6360	.6540	.6730	.6880	.7100
FMI															
90.000	-.1787	-.1945	-.2161	-.2119	-.2234	-.2407	-.2403	.0000	-.2505	-.2522	-.2332	-.2338	-.2451	-.2775	.0000
100.000	-.2147	-.2396	-.2468	-.2399	-.2504	-.2673	-.2619	-.2660	-.2301	-.2320	-.1858	-.1790	-.1824	-.1949	-.2544
110.000	-.2719	-.2750	-.2824	-.2859	-.2863	-.2908	-.2683	-.2150	-.1979	-.1709	-.1654	-.1535	-.1349	-.1599	-.2006
120.000						-.2057								-.1230	
130.000						-.2821								-.1179	
140.000						-.2074								-.1780	
150.000						-.1116								-.1370	
160.000						-.0780								-.1019	
170.000						-.0658								-.0362	
180.000	-.0962	-.0887	-.0567	-.0662	-.0626	-.0634	-.0798	-.0836	-.0984	-.1010	-.1073	-.0966	-.0928	-.0362	-.0968
K/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
FMI															
60.000															
70.000															
80.000															
90.000	-.3422	-.1332	-.4124	-.4556	-.3780	.0000									
100.000	-.3452	-.3303	-.4089	-.2906	-.2686	-.3275									
110.000	-.2676	-.3010	-.2091	-.1164	-.1584	-.3038									
120.000						-.0527									
130.000						-.0223									
140.000						-.0348									
150.000						.3587									
160.000						.4224									
170.000						.4087									
180.000	-.2160	-.2292	-.0906	-.0040	.3349	.4087									

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (FEC076)

$$\text{MACM} (17) = 1.921 \quad \text{ALFMA} (1) = 6.409$$

SECTION 11 FUSELAGE

DEPENDENT VARIABLE CF

[illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECC006)

MACH (10) = 1.500 ALPHA (3) = 10.500

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
CHI															
80.000	.1110	.0987	.0537												
70.000	.1058	.1036	.0667												
60.000	.0935	.1036	.0801												
50.000		.1114	.1034	-.0878	-.1267	-.1083	.0000	-.0875	-.1191	-.1102	-.1234	-.1230	-.1460	-.1654	
40.000					-.1280	-.1344	-.1264	-.1133	-.1228	-.1295	-.1520	-.1565	-.1824	-.1791	
30.000						-.1656	-.1608	-.1710	-.1630	-.1827	-.1896	-.1943	-.2018	-.2181	-.2187
20.000							-.1753						-.2546		
10.000								-.3168					-.1469		
0.000									-.1975				-.1397		
150.000										-.3674			-.1389		
160.000											-.3475		-.1456		
170.000												-.3363	-.1523		
180.000													-.1497	-.1099	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
CHI															
90.000	-.1558	-.1568	-.1805	-.1746	-.1849	-.1887	-.1798	.0000	-.1550	-.1387	-.1017	-.0898	-.1129	-.1285	.0000
80.000	-.1857	-.2020	-.2012	-.1898	-.1744	-.1753	-.1693	-.1584	-.1370	-.1455	-.0945	-.0853	-.0878	-.0925	-.1566
70.000	-.2285	-.2151	-.1866	-.1648	-.1557	-.1588	-.1509	-.1428	-.1269	-.1160	-.1004	-.0795	-.0632	-.0774	-.1204
60.000					-.1114									-.0579	
50.000						-.0917								-.0866	
40.000							-.0716							-.0570	
30.000								-.0472						-.0479	
20.000									-.0427					-.0408	
10.000										-.0359				-.0408	
0.000	-.0881	-.0764	-.0453	-.0520	-.0439	-.0404	-.0429	-.0457	-.0487	-.0487	-.0427	-.0440	-.0427	-.0433	-.0424

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
CHI									
60.000									
70.000									
80.000									
90.000									
100.000	-.1800	-.0851	-.2271	-.2320	-.1578	.0000			
110.000	-.1813	-.1914	-.2263	-.1131	-.0860	-.1253			
120.000	-.1477	-.1783	-.0968	-.0041	-.0270	-.1182			
130.000						.0605			
140.000						.1549			
150.000						.1700			
160.000						.3353			
170.000						.4003			
180.000						.3901			
190.000	-.1358	-.1305	-.0372	.1963	.3417	.5139			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (REC008)

MACH (10) = 1.499 ALPHA (4) = 12.830

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.1045	.0911	.0602											
70.000	.0777	.0939	.0635											
80.000	.0721	.0869	.0732											
90.000		.0596	.0685	.1119	.1014	.0000	.0819	.1129	.1072	.1200	.1167	.1415	.1617	
100.000			.1141	.1263	.1163	.1038	.1115	.1131	.1181	.1489	.1791	.1780		
110.000			.1463	.1533	.1641	.1539	.1703	.1779	.1870	.2004	.1989	.2215		
120.000				.1627							.2265			
130.000				.3126							.1683			
140.000				.4126							.1528			
150.000				.3843							.1415			
160.000				.3586							.1431			
170.000				.3426							.1428			
180.000				.3256	.2573	.2320	.2240	.2160	.1957	.1865	.1615	.1441	.1052	

X/L	.4500	.4680	.4880	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
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PHI

90.000	.1506	.1829	.1816	.1786	.1903	.2076	.2089	.1950	.1771	.1496	.1284	.1193	.1624	.0000
100.000	.11832	.2023	.2069	.2058	.2004	.2236	.2219	.2057	.1651	.1167	.1160	.1132	.1173	.1791
110.000	.2356	.2343	.2350	.2302	.2210	.2095	.1888	.1670	.1455	.1299	.1141	.1075	.1002	.1421
120.000					.1436								.0754	
130.000					.1439								.1134	
140.000					.0969								.0854	
150.000					.0617								.0632	
160.000					.0512								.0527	
170.000					.0431								.0547	
180.000	.0827	.0733	.0459	.0574	.0518	.0469	.0478	.0467	.0544	.0508	.0564	.0566	.0579	.0616

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI

60.000							.1240		
70.000							.2187	.1666	.0000
80.000							.2533	.2500	.1724
90.000	.2154	.0976	.2711	.2836	.2223	.0000	.2266	.2404	.2561
100.000	.2150	.2193	.2718	.1649	.1344	.1800			
110.000	.1761	.2047	.1290	.0387	.0599	.1600			
120.000						.0368			
130.000						.1273			
140.000						.0739			
150.000						.3412			
160.000						.4861			
170.000						.3708			
180.000	.1597	.1604	.0909	.1338	.3521	.6081			

ABULATED SOURCE DATA - 1A29/OA63

DATE 24 MAR 74

REC'D 38

AMES 68-630 FIRE VENTING - SHUTTLE ORBITER

$$\text{MACH} (10) = 1.499 \quad \text{ALPHA} (5) = 14.750$$

SECTION (1) FUSELA;E

DEPENDENT VARIABLE CP

[illegible]

148

[illegible]

17

1981

PHI	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000					
	-.5473	-.1633	-.1628	-.1805	-.1894	-.2037	-.2042	-.0000	-.2069	-.2104	-.1917	-.1814	-.1784	-.1971	-.0000
	-.1799	-.2005	-.2092	-.2081	-.2124	-.2294	-.2292	-.2264	-.2012	-.2050	-.1590	-.1534	434	-.1457	-.1976
	-.2348	-.2346	-.2418	-.2485	-.2487	-.2520	-.2313	-.1999	-.1631	-.1496	-.1417	-.1357	-.1179	-.1192	-.1591
					-.1785								-.0961		
					-.2435								-.1226		
					-.1300								-.1366		
					-.0729								-.0923		
					-.0551								-.0750		
					-.0414								-.0705		
	-.0848	-.0796	-.0526	-.0635	-.0524	-.0463	-.0504	-.0392	-.0666	-.0752	-.0730	-.0763	-.0739	-.0713	-.0735
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						

22

PMI

60,000	-	-2609	-1116	-3151	-3302	-2785	.7000
70,000							
80,000							
90,000							
100,000		-2622	-2562	-3140	-2060	-1800	-.2265
110,000		-2075	-2409	-1596	-.0722	-.0928	-.1994
120,000							.0139
130,000							-.0860
140,000							-.0118
150,000							.3392
160,000							.4109
170,000							.3671
180,000	-1740	-1867	-0626	-0164			.6753

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DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OA83

PAGE 1240

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD06)

PACH (10) = 1.499 ALPHA (6) = 16.830

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4030	.4310
PHI															
60.000	.0986	.0876	.0596												
70.000	.0469	.0692	.3528												
80.000	.0221	.0467	.0523												
90.000		.0616	.0390	.0668	-.1037	-.0952	.0000	-.0808	-.0998	-.1015	-.1171	-.1110	-.1343	-.1585	
100.000					-.1072	-.1115	-.0985	-.0847	-.0955	-.1087	-.1396	-.1437	-.1709	-.1711	
110.000					-.1257	-.1326	-.1370	-.1275	-.1530	-.1713	-.1826	-.1972	-.1809	-.2174	
120.000					-.1598								-.1942		
130.000					-.3037								-.2842		
140.000					-.4328								-.2248		
150.000					-.4129								-.1661		
160.000					-.3800								-.1482		
170.000					-.3528								-.1406		
180.000					-.3394	-.2695	-.2460	-.2373	-.2228	-.2027	-.1859	-.1539	-.1393	-.1025	
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1500	-.1654	-.1782	-.1750	-.1806	-.1954	-.1967	.0000	-.2123	-.2209	-.2203	-.2244	-.2300	-.2511	.0000
100.000	-.1811	-.2028	-.2361	-.2020	-.2032	-.2154	-.2183	-.2237	-.2130	-.2265	-.1883	-.1840	-.1729	-.1761	-.2193
110.000	-.2359	-.2365	-.2422	-.2465	-.2398	-.2539	-.2462	-.2284	-.1985	-.1781	-.1613	-.1515	-.1340	-.1395	-.1693
120.000						-.1948							-.1147		
130.000						-.2397							-.1169		
140.000						-.1711							-.1761		
150.000						-.0897							-.1250		
160.000						-.0701							-.0982		
170.000						-.0592							-.0908		
180.000	-.0865	-.0780	-.0475	-.0638	-.0602	-.0654	-.0726	-.0793	-.0848	-.0932	-.0939	-.0952	-.0912	-.0920	-.0987
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PHI									
60.000							-.2693		
70.000							-.4421	-.2557	.0000
80.000							-.4200	-.4163	-.1837
90.000	-.3694	-.1327	-.3538	-.3759	-.3411	.0000	-.3587	-.3761	-.3357
100.000	-.3103	-.2913	-.3564	-.2582	-.2292	-.2759			
110.000	-.2360	-.2634	-.1896	-.1091	-.1228	-.2497			
120.000						-.0113			
130.000						.0288			
140.000						-.1308			
150.000						.3365			
160.000						.4296			
170.000						.3581			
180.000	-.1906	-.2044	-.0908	-.0428	.3186	.7275			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD07)

MACH (1) = 1.751 ALPHA (1) = 6.378

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

130.000 .2425
 140.000 .2964
 150.000 .3251
 160.000 .2880
 170.000 .2657
 180.000 -.0575 -.0679 .0616 .1505 .1845 .2196

MACH (1) = 1.752 ALPHA (2) = 8.478

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0670 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

61.000 .0944 .0747 .0325
 70.000 .0985 .0776 .0418
 80.000 .1034 .0651 .0334
 90.000 .0683 .0288 -.0950
 100.000 -.1137 -.1070 .0000
 110.000 -.1137 -.1241 -.1226
 120.000 -.1596 -.1548 -.1572
 130.000 -.1541
 140.000 -.2379
 150.000 -.2829
 160.000 -.2666
 170.000 -.2614
 180.000 -.2626
 190.000 -.2539
 200.000 -.2189 -.1769 -.1656
 210.000 -.1937 -.1487 -.1388
 220.000 -.1377 -.1342 -.1209

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.1319 -.1371 -.1394
 100.000 -.1475 -.1457 -.1304
 110.000 -.1411 -.1209 -.1045
 120.000 -.0978 -.0947
 130.000 -.1192
 140.000 -.1042
 150.000 -.1062
 160.000 -.1048
 170.000 -.1022
 180.000 -.1095
 190.000 -.1057
 200.000 -.1051
 210.000 -.1043
 220.000 -.1034
 230.000 -.1013
 240.000 -.0920
 250.000 -.0838
 260.000 -.0820
 270.000 -.0755
 280.000 -.0773
 290.000 -.0542
 300.000 -.0451
 310.000 -.0516
 320.000 -.0530
 330.000 -.0469
 340.000 -.0425
 350.000 -.0394
 360.000 -.0413
 370.000 -.0480
 380.000 -.0527
 390.000 -.0501

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OA63

PAGE 1243

AMEC 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC007)

MACH (1) = 1.752 ALPHA (2) = 8.476

SECTION (1) FUSELAGE DEPENDENT VARIABLE CF

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PHI									
60.000							-.1095		
70.000							-.1375	-.1392	.0000
80.000							-.1232	-.1654	-.0999
90.000	-.1183	-.0809	-.1485	-.1424	-.0944	.0000	-.1101	-.1584	-.1681
100.000	-.1185	-.1247	-.1485	-.0629	-.0387	-.0623			
110.000	-.0936	-.1113	-.0556	.0185	.0183	-.0626			
120.000						.0502			
130.000						.1807			
140.000						.2607			
150.000						.3329			
160.000						.3407			
170.000						.3233			
180.000	-.0743	-.0853	-.0137	.1241	.1908	.2384			

MACH (1) = 1.751 ALPHA (3) = 10.480

SECTION (1) FUSELAGE DEPENDENT VARIABLE CF

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI															
60.000	.0661	.0655	.0292												
70.000	.0791	.0672	.0335												
80.000	.0785	.0736	.0437												
90.000			.0623	.0080	-.0902	-.1114	-.1015	.0000	-.0862	-.1010	-.0992	-.1076	-.1094	-.1293	-.1353
100.000						-.1111	-.1140	-.1108	-.1053	-.1102	-.1175	-.1299	-.1330	-.1492	-.1475
110.000						-.1436	-.1409	-.1430	-.1415	-.1517	-.1595	-.1639	-.1697	.0000	-.1757
120.000						-.1462								.0000	
130.000						-.2398								-.1163	
140.000						-.2905								-.1172	
150.000						-.2740								-.1255	
160.000						-.2688								-.1345	
170.000						-.2705								-.1411	
180.000						-.2641	-.2314	-.1972	-.1789	-.1650	-.1537	-.1538	-.1483	-.1417	-.1296

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1342	-.1379	-.1434	-.1411	-.1414	-.1454	-.1399	-.1370	-.1315	-.1285	-.1127	-.1010	-.0911	-.0966	.0000
100.000	-.1506	-.1566	-.1526	-.1437	-.1318	-.1313	-.1335	-.1271	-.1148	-.1189	-.1045	-.0958	-.0809	-.0793	-.0915
110.000	-.1693	-.1540	-.1356	-.1258	-.1229	-.1169	-.1171	-.1107	-.1031	-.0937	-.0920	-.0858	-.0700	-.0589	-.0659
120.000						-.0975								-.0633	
130.000						-.0747								-.0659	
140.000						-.0680								-.0516	
150.000						-.0592								-.0437	

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (1) = 1.751 ALPHA (3) = 10.480

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
60.000															
70.000															
80.000															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

X/L	.7290	.7470	.7610	.7850	.8030	.8290	.8620	.9000	.9400
PHI									
60.000									
70.000									
80.000									
90.000									
100.000									
110.000									
120.000									
130.000									
140.000									
150.000									
160.000									
170.000									
180.000									

MACH (1) = 1.752 ALPHA (4) = 12.530

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
60.000															
70.000															
80.000															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

PHI

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACM} (1) = 1.792 \quad \text{ALPHA} (4) = 12.530$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.4500	.4600	.4800	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6800	.7100
PMT														
90.000	-.1253	-.1305	-.1397	-.1420	-.1464	-.1570	-.1591	-.1629	-.1576	-.1397	-.1297	-.1224	-.1216	.0000
100.000	-.1475	-.1578	-.1602	-.1370	-.1582	-.1619	-.1617	-.1582	-.1450	-.1271	-.1122	-.1005	-.0880	-.1105
110.000	-.1781	-.1798	-.1761	-.1721	-.1588	-.1530	-.1430	-.1330	-.1204	-.1072	-.0970	-.0805	-.0736	-.0831
120.000						-.1207							-.0703	
130.000						-.0923							-.0932	
140.000						-.0721							-.0648	
150.000						-.0572							-.0513	
160.000						-.0546							-.0463	
170.000						-.0613							-.0374	
180.000						-.0791							-.0694	-.0781
190.000						-.0966							-.0703	
200.000						-.0818							-.0689	
210.000						-.0927							-.0707	
220.000						-.1020							-.0739	
230.000						-.1096							-.0704	
240.000						-.1159							-.0694	
250.000						-.1207							-.0689	
260.000						-.1237							-.0697	
270.000						-.1247							-.0703	
280.000						-.1247							-.0703	
290.000						-.1237							-.0697	
300.000						-.1207							-.0689	
310.000						-.1159							-.0694	
320.000						-.1096							-.0704	
330.000						-.1020							-.0703	
340.000						-.0927							-.0703	
350.000						-.0818							-.0694	
360.000						-.0791							-.0689	
370.000						-.0739							-.0694	
380.000						-.0689							-.0694	
390.000						-.0648							-.0694	
400.000						-.0613							-.0694	
410.000						-.0572							-.0694	
420.000						-.0546							-.0694	
430.000						-.0513							-.0694	
440.000						-.0463							-.0694	
450.000						-.0413							-.0694	
460.000						-.0374							-.0694	
470.000						-.0332							-.0694	
480.000						-.0291							-.0694	
490.000						-.0250							-.0694	
500.000						-.0210							-.0694	
510.000						-.0171								

.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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[illegible]

MACM (1) = 1.730 ALPHA (5) = 14.650

SECTION (1) FUSelage

DEPENDENT VARIABLE CP

[illegible]

DATE 24 MAR 74

TASULATED SOURCE DATA - 1A29/OA63

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AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (1) = 1.750 ALPHA (5) = 14.650

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2640 .3010 .3190 .3360 .3570 .3750 .3940 .4050 .4310

PHI

160.000 -.2782
 110.000 -.2785
 160.000 -.2730 -.2425 -.2176 -.2014 -.1921 -.1811 -.1733 -.1586 -.1557 -.1336
 -.1382
 -.1494
 -.1557

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.1292 -.1339 -.1425 -.1425 -.1471 -.1595 -.1645 -.1723 -.1735 -.1788 -.1721 -.1685 -.1645 -.1630 .0000
 100.000 -.1454 -.1592 -.1624 -.1592 -.1618 -.1711 -.1773 -.1799 -.1691 -.1712 -.1510 -.1387 -.1282 -.1200 -.1348
 110.000 -.1829 -.1863 -.1889 -.1875 -.1843 -.1843 -.1756 -.1627 -.1472 -.1320 -.1224 -.1136 -.1093 -.0955 -.1031
 120.000 -.1434
 130.000 -.1399
 140.000 -.0859
 150.000 -.0625
 160.000 -.0584
 170.000 -.0595
 180.000 -.1203 -.1114 -.0881 -.0909 -.0856 -.0812 -.0835 -.0829 -.0844 -.0858 -.0850 -.0873 -.0835 -.0853 -.0941

X/L

.7250 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 -.2173
 70.000 -.3201 -.2899 .0000
 80.000 -.2876 -.2989 -.2664
 90.000 -.2007 -.0992 -.2391 -.2542 -.2243 .0000
 100.000 -.2.22 -.1912 -.2391 -.1679 -.1362 -.1740
 110.000 -.1595 -.1761 -.1278 -.0601 -.0566 -.1559
 120.000 .0192
 130.000 .0947
 140.000 .0675
 150.000 .2747
 160.000 .4075
 170.000 .3945
 180.000 -.1214 -.1406 -.0900 -.0842 .1925 .4472

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/OA63

(RECORD)

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

MACH (1) = 1.51 ALPHA (8) = 16.680

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0870	.1200	.1640	.2030	.2420	.2640	.2620	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
-----	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

PMI

60.000	.0630	.0471	.0193												
70.000	.0285	.0381	.0190												
80.000	.0120	.0266	.0246												
90.000			.0433	.0074	-.0926										
100.000						-.1120	-.1066	.0000	-.0944	-.0961	-.0941	-.0981	-.0956	-.1331	-.1273
110.000						-.1163	-.1025	-.0949	-.0889	-.0936	-.0981	-.1086	-.1149	-.1319	-.1362
120.000						-.1039	-.1065	-.1146	-.1123	-.1297	-.1376	-.1449	-.1535	.0000	-.1723
130.000						-.1201								.0000	
140.000						-.2275								-.2002	
150.000						-.3141								-.1662	
160.000						-.3017								-.1417	
170.000						-.2869								-.1449	
180.000						-.2828	-.2543	-.2305	-.2114	-.1984	-.1674	-.1763	-.1645	-.1553	-.1339

X/L

.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
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PMI

90.000	-.1227	-.1316	-.1394	-.1460	-.1504	-.1656	-.1689	-.1750	-.1800	-.1917	-.1915	-.1965	-.2020	-.2064	.0000
100.000	-.1423	-.1561	-.1573	-.1581	-.1625	-.1659	-.1768	-.1818	-.1750	-.1826	-.1710	-.1640	-.1558	-.1508	-.1671
110.000	-.1606	-.1616	-.1641	-.1676	-.1904	-.1936	-.1891	-.1800	-.1671	-.1511	-.1482	-.1362	-.1225	-.1190	-.1264
120.000						-.1677								-.1037	
130.000						-.1996								-.1210	
140.000						-.1195								-.1309	
150.000						-.0768								-.0970	
160.000						-.0663								-.0824	
170.000						-.0692								-.0903	
180.000	-.1166	-.1066	-.0916	-.0956	-.0910	-.0932	-.0949	-.0990	-.1019	-.1046	-.1046	-.1064	-.1090	-.1125	-.1208

X/L	.7290	.7470	.7670	.7850	.8030	.8200	.8620	.9000	.9400
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PMI

60.000									
70.000									
80.000									
90.000	-.2438	-.1255	-.2611	-.2921	-.2662	.0000			
100.000	-.2459	-.2299	-.2767	-.2020	-.1726	-.2192			
110.000	-.1955	-.2124	-.1537	-.0883	-.0866	-.1915			
120.000						-.0063			
130.000						.0270			
140.000						-.0523			
150.000						.2752			
160.000						.4214			
170.000						.3681			
180.000	-.1470	-.1674	-.1220	-.1200	.1397	.4390			

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0463

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (2) = 2.019 ALPHA (1) = 6.799

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI														
60.000	.0659	.0422	.0262											
70.000	.0963	.0652	.0375											
80.000	.1073	.0756	.0494											
90.000		.0622	.0112	-.0695	-.0936	-.0933	.0700	-.0833	-.0882	-.0860	-.0888	-.0919	-.1101	-.0986
100.000				-.0942	-.1003	-.1006	-.1016	-.1037	-.1046	-.1083	-.1095	-.1104	-.1104	-.1074
110.000				-.1277	-.1290	-.1299	-.1253	-.1345	-.1357	-.1350	-.1310	.0000	.0000	-.1162
120.000				-.1091										
130.000				-.1603										
140.000				-.2002										
150.000				-.1913										
160.000				-.1852										
170.000				-.1862										
180.000				-.1852										
X/L	.4500	.4880	.4680	.5050	.5240	.5460	.5610	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.0950	-.0972	-.1014	-.0975	-.0954	-.0944	-.0972	-.0944	-.0904	-.0895	-.0816	-.0727	-.0650	.0000
100.000	-.1065	-.1076	-.1020	-.0957	-.0890	-.0896	-.0904	-.0889	-.0831	-.0852	-.0779	-.0714	-.0610	-.0627
110.000	-.1106	-.1032	-.0935	-.0869	-.0844	-.0832	-.0803	-.0772	-.0745	-.0723	-.0730	-.0690	-.0601	-.0511
120.000						-.0675								
130.000						-.0649								
140.000						-.0652								
150.000						-.0631								
160.000						-.0683								
170.000						-.0748								
180.000	-.1087	-.1054	-.0941	-.0926	-.0863	-.0828	-.0751	-.0714	-.0622	-.0585	-.0545	-.0533	-.0521	-.0541
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000														
70.000														
80.000														
90.000	-.0936	-.0843	-.1185	-.1126	-.0728	.0280								
100.000	-.0920	-.0982	-.0893	-.0556	-.0178	-.0350								
110.000	-.0675	-.0675	-.0305	.0086	.0224	.0355								
120.000				.0757										
130.000				.2110										
140.000				.2500										
150.000				.2923										
160.000				.2518										
170.000				.2323										
180.000	-.0561	-.0597	-.0123	.0970	.1479	.2122								

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECON7)

MACH (2) = 2.016 ALPHA (3) = 10.990

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI															
60.000	.0794	.0577	.0230												
70.000	.0674	.0547	.0297												
80.000	.0636	.0566													
90.000		.0481	.0013	-.0803	-.1002	-.0963	.0000	-.0840	-.0861	-.0846	-.0816	-.0863	-.1087	-.1006	
100.000					-.0993	-.0882	-.0852	-.0840	-.0876	-.0906	-.0948	-.0994	-.1078	-.1102	
110.000					-.1038	-.1066	-.1087	-.1102	-.1207	-.1237	-.1272	-.1314	.0000	-.1347	
120.000					-.1011								.0000		
130.000					-.1692								-.1287		
140.000					-.2222								-.1296		
150.000					-.2125								-.1296		
160.000					-.2071								-.1293		
170.000					-.2083								-.1296		
180.000					-.2083	-.1966	-.1804	-.1686	-.1590	-.1460	-.1434	-.1302	-.1338	-.1251	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	-.1033	-.1100	-.1157	-.1148	-.1172	-.1217	-.1278	-.1321	-.1321	-.1342	-.1285	-.1239	-.1157	-.1102	.0000
100.000	-.1158	-.1259	-.1277	-.1271	-.1277	-.1304	-.1333	-.1342	-.1293	-.1312	-.1218	-.1160	-.1036	-.0935	-.0939
110.000	-.1403	-.1415	-.1424	-.1415	-.1283	-.1319	-.1287	-.1205	-.1138	-.1108	-.1051	-.0993	-.0914	-.0829	-.0773
120.000					-.1157								-.0801		
130.000					-.0822								-.0801		
140.000					-.0719								-.0613		
150.000					-.0661								-.0531		
160.000					-.0664								-.0494		
170.000					-.0743								-.0583		
180.000	-.1202	-.1112	-.0962	-.0953	-.0899	-.0859	-.0822	-.0777	-.0737	-.0713	-.0635	-.0695	-.0686	-.0652	-.0727

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI									
60.000							-.1902		
70.000							-.1886	-.1989	.0000
80.000							-.1602	-.1759	-.1895
90.000	-.1293	-.0752	-.1550	-.1623	-.1372	.0000	-.1303	-.1508	-.1723
100.000	-.1302	-.1323	-.1438	-.1090	-.0664	-.0843			
110.000	-.1012	-.1232	-.0921	-.0241	-.0038	-.0689			
120.000						.0688			
130.000						.1242			
140.000						.1739			
150.000						.2441			
160.000						.2883			
170.000						.2811			
180.000	-.0791	-.0945	-.0697	-.0365	.1097	.2425			

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0A63

PAGE 1251

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (2) = 2.018 ALPHA (4) = 13.000

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI															
60.000	.0788	.0562	.0224												
70.000	.0589	.0320	.0260												
80.000	.0480	.0308	.0330												
90.000		.0453	-.0011	-.0849	-.1017	-.0939	.0000	-.0816	-.0813	-.0807	-.0834	-.0896	-.1145	-.1037	
100.000					-.1014	-.0864	-.0813	-.0801	-.0834	-.0876	-.0930	-.0969	-.1142	-.1133	
110.000					-.0973	-.0939	-.0979	-.0997	-.1126	-.1171	-.1193	-.1241	.0000	-.1361	
120.000						-.0957							.0000		
130.000						-.1731							-.1465		
140.000						-.2322							-.1343		
150.000						-.2219							-.1274		
160.000						-.2159							-.1280		
170.000						-.2177							-.1370		
180.000					-.2171	-.2033	-.1867	-.1756	-.1635	-.1521	-.1465	-.1424	-.1391	-.1280	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	-.1058	-.1076	-.1124	-.1160	-.1175	-.1262	-.1340	-.1407	-.1423	-.1453	-.1401	-.1392	-.1355	-.1289	.0000
100.000	-.1196	-.1226	-.1250	-.1259	-.1286	-.1343	-.1426	-.1477	-.1447	-.1489	-.1358	-.1316	-.1203	-.1196	-.1100
110.000	-.1424	-.1457	-.1464	-.1478	-.1469	-.1496	-.1508	-.1465	-.1404	-.1304	-.1188	-.1112	-.1027	-.0960	-.0931
120.000						-.1358							-.1069		
130.000						-.1073							-.1063		
140.000						-.0657							-.0778		
150.000						-.0708							-.0601		
160.000						-.0674							-.0550		
170.000						-.0735							-.0671		
180.000	-.1184	-.1106	-.0986	-.0938	-.0899	-.0875	-.0845	-.0848	-.0820	-.0817	-.0747	-.0753	-.0741	-.0741	-.0834

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PMI									
60.000							-.2159		
70.000							-.2277	-.2371	.0000
80.000							-.1959	-.2114	-.2226
90.000	-.1442	-.0861	-.1748	-.1872	-.1684	.0000	-.1606	-.1796	-.1975
100.000	-.1439	-.1457	-.1533	-.1315	-.0931	-.1073			
110.000	-.1146	-.1361	-.1094	-.0435	-.0235	-.0885			
120.000						.0552			
130.000						.1058			
140.000						.1070			
150.000						.2182			
160.000						.3056			
170.000						.2920			
180.000	-.0956	-.1064	-.10870	-.0828	.0617	.2971			

MACH (2) = 2.019 ALFMA (5) = 15.050

AMES 68-830 FRESSURE VENTING - SHUTTLE ORBITER

(REG 597)

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0877	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4090	.4310
PHI															
60.000	.0775	.0965	.0259												
70.000	.0475	.0493	.0259												
80.000	.0346	.0391	.0289												
90.000			.0418	.0013	-.0811	-.0996	-.0945	.0000	-.0870	-.0849	-.0870	-.0865	-.0923	-.1167	-.1066
100.000					-.0993	-.0993	-.0975	-.0915	-.0870	-.0876	-.0894	-.0936	-.0982	-.1036	-.1119
110.000					-.0895	-.0895	-.0894	-.0930	-.0933	-.1041	-.1092	-.1128	-.1227	.0000	-.1400
120.000					-.0931									.0000	
130.000					-.1731									-.1650	
140.000					-.2396									-.1459	
150.000					-.2315									-.1269	
160.000					-.2237									-.1263	
170.000					-.2255									-.1260	
180.000					-.2246	-.2107	-.2107	-.1934	-.1817	-.1697	-.1589	-.1483	-.1406	-.1308	-.1298
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1060	-.1114	-.1147	-.1194	-.1212	-.1302	-.1341	-.1429	-.1456	-.1501	-.1517	-.1541	-.1562	-.1562	.0000
100.000	-.1164	-.1236	-.1272	-.1297	-.1305	-.1367	-.1417	-.1480	-.1462	-.1520	-.1456	-.1471	-.1386	-.1344	-.1286
110.000	-.1436	-.1445	-.1466	-.1466	-.1478	-.1549	-.1556	-.1553	-.1517	-.1471	-.1362	-.1305	-.1214	-.1151	-.1075
120.000						-.1549								-.0990	
130.000						-.1653								-.1169	
140.000						-.1021								-.1093	
150.000						-.0751								-.0803	
160.000						-.0688								-.0715	
170.000						-.0709								-.0821	
180.000	-.1221	-.1129	-.0992	-.0965	-.0914	-.0842	-.0857	-.0869	-.0869	-.0906	-.0884	-.0905	-.0927	-.0943	-.1015
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PHI															
60.000							-.2372								
70.000							-.2607	-.2682	.0000						
80.000							-.2356	-.2491	-.2520						
90.000	-.1674	-.1033	-.1972	-.2077	-.1939	.0000	-.1978	-.2153	-.2297						
100.000	-.1680	-.1656	-.1782	-.1511	-.1135	-.1561									
110.000	-.1364	-.1536	-.1255	-.0585	-.0431	-.1139									
120.000						.0343									
130.000						.0418									
140.000						-.0158									
150.000						.2246									
160.000						.3109									
170.000						.2715									
180.000	-.1084	-.1256	-.1081	-.1069	-.0031	.3013									

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

(RECD07)

MACH (2) = 2.016 ALPHA (6) = 17.160

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0670	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PM1														
60.000	.0743	.0564	.0251											
70.000	.0370	.0397	.0200											
80.000	.0167	.0236	.0191											
90.000		.0290	-.0056	-.0836	-.1006	-.0978	.0000	-.0936	-.0957	-.0972	-.1002	-.0960	-.1194	-.1108
100.000					-.1009	-.0972	-.0939	-.0918	-.0930	-.0963	-.0996	-.0992	-.1069	-.1111
110.000					-.0917	-.0939	-.0984	-.0996	-.1091	-.1159	-.1182	-.1250	.0000	-.1318
120.000					-.0914								.0000	
130.000					-.1715								-.1946	
140.000					-.2450								-.1635	
150.000					-.2399								-.1303	
160.000					-.2304								-.1283	
170.000					-.2313								-.1280	
180.000					-.2316	-.2156	-.1993	-.1871	-.1725	-.1606	-.1496	-.1422	-.1407	-.1309

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5810	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PM1														
90.000	-.1093	-.1136	-.1184	-.1222	-.1243	-.1329	-.1382	-.1469	-.1523	-.1623	-.1620	-.1735	-.1792	.0000
100.000	-.1158	-.1240	-.1264	-.1264	-.1305	-.1326	-.1400	-.1451	-.1454	-.1538	-.1491	-.1506	-.1488	-.1485
110.000	-.1367	-.1394	-.1424	-.1450	-.1480	-.1542	-.1574	-.1571	-.1544	-.1502	-.1446	-.1377	-.1272	-.1219
120.000						-.1610							-.1080	
130.000						-.1791							-.1140	
140.000						-.1412							-.1374	
150.000						-.0880							-.1056	
160.000						-.0745							-.0918	
170.000						-.0733							-.1008	
180.000	-.1202	-.1116	-.1012	-.0953	-.0941	-.0928	-.0940	-.0991	-.1030	-.1102	-.1125	-.1182	-.1233	-.1309

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
-----	-------	-------	-------	-------	-------	-------	-------	-------	-------

PM1									
60.000							-.2520		
70.000							-.2831	-.2801	.0000
80.000							-.2667	-.2765	-.2673
90.000	-.2036	-.1336	-.2290	-.2448	-.2343	.0000	-.2350	-.2467	-.2505
100.000	-.2047	-.1982	-.2326	-.1847	-.1900	-.1735			
110.000	-.1680	-.1823	-.1467	-.0834	-.0641	-.1445			
120.000						.0272			
130.000						.0209			
140.000						-.0471			
150.000						.2384			
160.000						.2798			
170.000						.2396			
180.000	-.1324	-.1467	-.1405	-.1369	-.0513	.3072			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (1) = .600 ALPHA (1) = 6.144

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

130.000 -.0855
 140.000 -.0544
 150.000 .0192
 160.000 .0584
 170.000 .0918
 180.000 -.0625 .0734 .1039 .1365 .1797 .1951

MACH (1) = .601 ALPHA (2) = 6.292

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PMI

60.000 -.0763 -.0641 -.1796
 70.000 -.0505 -.0671 -.1716
 80.000 -.0804 -.0799 -.1767
 90.000 -.1940 -.3489 -.4121 -.2466 -.1893 .0000 -.1471 -.1832 -.1631 -.1423 -.1122 -.0893 -.1477
 100.000 -.2495 -.2237 -.1992 -.1567 -.1385 -.1152 -.1519 -.1096 -.1417 -.1096
 110.000 -.2783 -.2589 -.2349 -.1826 -.1554 -.1254 -.1068 -.0959 .0000
 120.000 -.2783
 130.000 -.3639
 140.000 -.3121
 150.000 -.2562
 160.000 -.2163
 170.000 -.2345
 180.000 -.2364 -.1921 -.1583 -.1427 -.1210 -.0897 -.0785 -.0737 -.0750 -.0445

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PMI

90.000 -.0925 -.1169 -.1179 -.1004 -.1118 -.1341 -.1300 -.1273 -.1778 -.2061 -.2441 -.2695 -.2660 -.2531 .0000
 100.000 -.1039 -.1287 -.1204 -.1109 -.0915 -.1315 -.1491 -.1500 -.1426 -.2100 -.2076 -.2341 -.2328 -.1896 -.1630
 110.000 -.1023 -.1042 -.1093 -.1140 -.1194 -.1267 -.1291 -.1300 -.1439 -.1513 -.1780 -.1786 -.1673 -.1175
 120.000 -.0947
 130.000 -.0727
 140.000 -.0798
 150.000 -.0630
 160.000 -.0549
 170.000 -.0507
 180.000 -.0761 -.0765 -.0737 -.0654 -.0713 -.0569 -.0727 -.0740 -.0885 -.0791 -.0860 -.0661 -.0574 -.0495 .0022

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (REC008)

MACH (1) = .601 ALPHA (2) = 0.292

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 .1552
70.000 .1121 .1329 .0000
80.000 .0372 .0655 .0486
90.000 -.1935 -.1216 -.0690 -.0418 -.0155 .0000
100.000 -.1284 -.0646 -.0490 -.0055 -.0132 -.0291
110.000 -.0790 -.0139 .0079 .0179 -.0336 -.0962
120.000 .1129 .1696
130.000 .0721
140.000 .0824
150.000 .0150
160.000 .0684
170.000 .1112
180.000 -.0812 .0965 .0956 .1309 .1651 .1415

MACH (1) = .601 ALPHA (3) = 10.360

SECTION (1) FUSELAGE DEPENDENT VARIABLE CF

X/L .0670 .1260 .1610 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 -.0933 -.0917 -.1672
70.000 -.0703 -.0760 -.1854
80.000 -.0546 -.0962 -.1863
90.000 -.2033 -.3551 -.4015 -.2762 -.1997 .0000 -.1731 -.2032 -.1618 -.1747 -.1358 -.1100 -.1746
100.000 -.2649 -.2335 -.2204 -.1658 -.1619 -.1444 -.1754 -.1415 -.1838 -.1536
110.000 -.2307 -.2566 -.2534 -.1901 -.1690 -.1549 -.1438 -.138 .0000
120.000 -.2874
130.000 -.4009
140.000 -.3337
150.000 -.2896
160.000 -.2436
170.000 -.2512
180.000 -.2327 -.2054 -.1571 -.1492 -.1361 -.1029 -.0946 -.0588 -.0449 -.0811

PHI

60.000 .4509 .4660 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6840 .7100
70.000 .1336 .1238 .1140 .1318 .1477 .1725 .1704 .1937 .2007 .2689 .2639 .3115 .3141 .3125 .3000
80.000 .1345 .1674 .1483 .1499 .1454 .1654 .1868 .1975 .1878 .2633 .2738 .2722 .2681 .2712 .2137
90.000 .1194 .1314 .1327 .1416 .1492 .1667 .1671 .1697 .1617 .1981 .2039 .2026 .2025 .2173 .2167
100.000 .1176
110.000 .1176
120.000 .1142
130.000 .1142
140.000 .1142
150.000 .1142
160.000 .1142
170.000 .1142
180.000 .1142

TABULATED SOURCE DATA - 1A29/OA63

(RECORD)

JAMES 00-030 EFFESURE VENTING - SHUTTLE ORBITER

$$\text{MACH} (1) = .691 \quad \text{ALPHA} (3) = 10.360$$

SECTION (USE) AGE

Year	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
1950	4900	4600	5050	5240	5460	5610	5600	5900	6170	6360	6540	6730	6980	7100							

P=1
- .0697
160.000
- .0376
170.000
- .0272

[illegible][illegible]
$$\text{MACH} (1) = .803 \quad \text{ALPHA} (4) = 12.410$$

SECTION / VARIABLE

Year	1920	1930	1940	1950	1960	1970	1980	1990	2000
Population (millions)	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.3	3.6
GDP (billions of dollars)	100	150	200	250	300	350	400	450	500
Per capita GDP (dollars)	83	100	111	119	125	129	133	136	139

[illegible]

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1990	4,900	4,680	4,660	5,050	5,240	5,460	5,610	5,800	5,980	6,170	6,360	6,540	6,730	6,920	7,100																																																																																																

III

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (1) = .603 ALPHA (4) = 12.410

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP									
X/L		.4500	.4600	.4800	.5050	.5240	.5400	.5610	.5800	.6170	.6360 .6540 .6730 .6880 .7100
PHI											
90.000		-.1673	-.1064	-.1943	1797	-.1791	-.2095	-.2016	-.2230	-.3237	-.3249 -.3639 -.3567 .0000
100.000		-.1632	-.2037	-.2126	-.1797	-.1721	-.2129	-.2243	-.2198	-.2981	-.3255 -.3191 -.2841 -.2464
110.000		-.1683	-.1649	-.1702	-.1632	-.1636	-.1692	-.1600	-.2025	-.2140	-.2652 -.2523 -.2326 -.1765
120.000							-.1301				-.1631
130.000							-.1521				-.1670
140.000							-.1322				-.1204
150.000							-.0742				-.0829
160.000							-.0719				-.0601
170.000							-.0742				-.0688
180.000		-.0646	-.0656	-.0782	-.0994	-.1013	-.0876	-.1245	-.1213	-.1268	-.1188 -.1227 -.1047 -.0803 -.0189

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000							.1069				
70.000							.0562	.1149	.0000		
80.000							.0142	.0415	.0152		
90.000		-.2816	-.2205	-.1503	-.1080	-.1057	.0000	-.0119	.0009	-.0103	
100.000		-.1903	-.1532	-.1127	-.0856	-.1133	-.0894				
110.000		-.1430	-.0843	-.0511	-.0473	-.0958	-.1561				
120.000							-.2251				
130.000							-.1431				
140.000							-.0760				
150.000							-.0762				
160.000							.0673				
170.000							.1359				
180.000		-.1283	.0384	.0661	.1122	.1597	.1353				

MACH (1) = .602 ALPHA (5) = 14.560

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP									
X/L		.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380 .3570 .3750 .3940 .4050 .4310
PHI											
60.000		-.1166	-.1056	-.1728							
70.000		-.0903	-.1110	-.1637							
80.000		-.1139	-.1075	-.1684							
90.000			-.1915	-.3355	-.4351	-.3204	-.2472	.0000	-.2268	-.2829	-.2357 -.2156 -.2161 -.1501 -.2120
100.000					-.3095	-.2921	-.2936	-.2146	-.2127	-.2150	-.2306 -.2199 -.2497 -.2202
110.000					-.3118	-.2948	-.2994	-.2656	-.2449	-.2175	-.2218 -.2218 -.2221 .0000
120.000					-.3491						
130.000					-.4125						-.1352
140.000					-.3653						-.1152
150.000					-.2456						-.1150

AMES 66-630 PRESSURE VENTING - SHUTTLE CROITER

(806235)

$$\text{MACH} (1) = .599 \quad \text{ALPHA} (6) = 16.620$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0875	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
	-1470	-1095	-2304												
70.000	-1346	-1515	-2077												
80.000	-1150	-1176	-2118												
90.000		-2189	-3363	-4765			-2686	.0000	-2541	-3119	-2782	-2694	-2594	-1757	-2559
100.000			-3049	-3055	-2952		-3055	-2952	-2666	-2715	-2464	-2088	-2386	-1932	-2415
110.000			-3668	-3488			-3488	-3576	-3048	-2920	-2833	-2862	-2827	.0000	-2245
120.000			-3629											.0000	
130.000			-4483											-1482	
140.000			-3659											-1527	
150.000			-2815											-1767	
160.000			-2712											-10920	
170.000			-2751											-10869	
180.000			-2458	-1856	-1425	-1415	-1005	-1216	-1118	-1086	-1086	-1086	-1086	-1086	-1086

[illegible][illegible]

$\text{MACH} (2) = .749 \quad \text{ALPHA} (1) = 6.315$

JAMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

(REC 000)

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.2820	.3010	.3190	.3380	.3370	.3750	.3940	.4050	.4310
PHI															
60.000	-.0561	-.0542	-.1765												
70.000	-.0863	-.0829	-.1754												
80.000	-.0261	-.1021	-.1824												
90.000		-.2075	-.3916	-.4596	-.2678	-.1890	.0000	-.1325	-.1922	-.1207	-.1154	-.0841	-.0748	-.0936	
100.000					-.2723	-.2087	-.1842	-.1407	-.1074	-.0957	-.1031	-.0817	-.1156	-.0872	
110.000					-.3206	-.2559	-.2175	-.1511	-.1165	-.0861	-.0781	-.0737	.0000	-.0734	
120.000					-.2902								.0000		
130.000					-.3651								-.0705		
140.000					-.3657								-.0745		
150.000					-.3510								-.0687		
160.000					-.4067								-.0839		
170.000					-.3862								-.0740		
180.000					-.4091	-.2159	-.1381	-.0946	-.1021	-.0714	-.0734	-.0839	-.0879	-.0724	
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6860	.7100
PHI															
90.000	-.0966	-.0717	-.0786	-.0854	-.0529	-.0766	-.0856	-.1045	-.1411	-.1816	-.2053	-.2646	-.2976	-.2766	.0000
100.000	-.0691	-.0792	-.0784	-.0825	-.0664	-.0831	-.0980	-.1147	-.1064	-.1861	-.1657	-.2219	-.2462	-.2077	-.1786
110.000	-.0827	-.0588	-.0670	-.0646	-.0833	-.0839	-.0818	-.0942	-.1037	-.1225	-.1622	-.1915	-.1872	-.1657	-.1296
120.000						-.0683								-.1056	
130.000						-.0700								-.0809	
140.000						-.0705								-.0728	
150.000						-.0517								-.0483	
160.000						-.0614								-.0424	
170.000						-.0568								-.0496	
180.000	-.0463	-.0585	-.0596	-.0550	-.0646	-.0592	-.0759	-.0746	-.0921	-.0991	-.0749	-.0784	-.0590	-.0448	.0001
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PHI															
60.000							.1599								
70.000							.1096	.1485	.0000						
80.000							.0651	.0640	.0203						
90.000	-.2246	-.0893	-.0955	-.0688	-.0500	.0000	.0317	.0416	-.0062						
100.000	-.2182	-.1534	-.0548	-.0425	-.0599	-.0335									
110.000	-.1071	-.0522	-.0291	.0017	-.0325	-.1239									
120.000						-.2123									
130.000						-.1355									
140.000						-.0319									
150.000						-.0357									
160.000						.0763									
170.000						.1178									
180.000	-.1124	.0644	.1069	.1345	.1994	.1991									

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OAGS

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AMES 66-63D PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (2) = .749 ALPHA (2) = 0.421

SECTION (1) FUSELAGE

DEPENDENT VARIABLE C_p

X/L	.0870	.1200	.1640	.2030	.2420	.2840	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	-.0580	-.0564	-.1580											
70.000	-.0305	-.0524	-.1590											
80.000	-.0321	-.0498												
90.000		-.1892	-.3858	-.4759	-.2782	-.1930	.0000	-.1314	-.1709	-.1420	-.1255	-.1021	-.0836	-.1404
100.000					-.2832	-.2246	-.1928	-.1341	-.1271	-.1071	-.1188	-.1045	-.1340	-.0995
110.000					-.3100	-.2574	-.2280	-.1722	-.1358	-.1020	-.0360	-.0992	.0000	-.1101
120.000					-.3102								.0000	
130.000					-.4139								-.0832	
140.000					-.3882								-.0846	
150.000					-.4534								-.0763	
160.000					-.4542								-.0673	
170.000					-.4641								-.0705	
180.000					-.4748	-.3258	-.1666	-.1064	-.0929	-.0781	-.0737	-.0825	-.0782	-.0713

X/L	.4900	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.1008	-.0818	-.0958	-.0820	-.0849	-.1043	-.1139	-.1481	-.1689	-.2473	-.2504	-.3224	-.3421	-.3173
100.000	-.1158	-.1195	-.1033	-.0637	-.0895	-.1213	-.1289	-.1497	-.1543	-.2292	-.2329	-.2587	-.3121	-.2623
110.000	-.0855	-.0844	-.0798	-.0871	-.0897	-.1022	-.1303	-.1311	-.1467	-.1891	-.1992	-.2329	-.2164	-.2172
120.000					-.0751								-.1452	
130.000					-.0893								-.1110	
140.000					-.0907								-.0808	
150.000					-.0540								-.0770	
160.000					-.0664								-.0716	
170.000					-.0680								-.0622	
180.000	-.0808	-.0581	-.0658	-.0615	-.0645	-.0777	-.0482	-.1074	-.0977	-.1341	-.1102	-.1050	-.0645	-.0689

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI

60.000							.1344		
70.000							.1017	.1464	.0000
80.000							.0372	.0697	.0433
90.000	-.2582	-.1903	-.1221	-.1028	-.0781	.0000	.0203	.0291	-.0081
100.000	-.2008	-.1085	-.0932	-.0433	-.0980	-.0585			
110.000	-.1294	-.0887	-.0425	-.0337	-.0722	-.1218			
120.000						-.2090			
130.000						-.1304			
140.000						-.0507			
150.000						.0398			
160.000						.0764			
170.000						.1434			
180.000	-.1276	.0269	.0796	.1140	.1715	.1693			

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A83

(RECORD)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACW (2) = .730 ALPHA (3) = 10.340

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI															
60.000	-.0721	-.0710	-.1668												
70.000	-.0396	-.0302	-.1617												
80.000	-.0446	-.0697	-.1612												
90.000			-.1763	-.3986	-.5003	-.3058	-.2082	.0000	-.1853	-.2099	-.1912	-.1784	-.1359	-.1057	-.1809
100.000						-.2967	-.2358	-.2302	-.1875	-.1816	-.147	-.1688	-.1545	-.1797	-.1150
110.000						-.3303	-.2878	-.2596	-.2067	-.1781	-.1472	-.1329	-.1261	.0000	-.1213
120.000						-.3712								.0000	
130.000						-.4541								-.0898	
140.000						-.4418								-.0898	
150.000						-.5304								-.0659	
160.000						-.5437								-.0669	
170.000						-.5467								-.0558	
180.000						-.5349	-.3639	-.2056	-.1482	-.0938	-.0671	-.0680	-.0669	-.0656	-.0709

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PHI															
90.000	-.1182	-.1275	-.1355	-.1246	-.1281	-.1456	-.1558	-.1763	-.2137	-.2762	-.2838	-.3698	-.4226	-.3843	.0000
100.000	-.1190	-.1562	-.1437	-.1315	-.1281	-.1416	-.1688	-.1701	-.1865	-.2821	-.2479	-.3369	-.3663	-.3396	-.2833
110.000	-.1071	-.1172	-.1318	-.1158	-.1286	-.1557	-.1572	-.1505	-.1677	-.2005	-.2374	-.2905	-.2743	-.2792	-.2120
120.000						-.1132								-.1821	
130.000						-.1389								-.1622	
140.000						-.1181								-.1428	
150.000						-.0928								-.1088	
160.000						-.0971								-.0905	
170.000						-.0783								-.1147	
180.000	-.0572	-.0938	-.0832	-.0986	-.0973	-.0985	-.1181	-.1289	-.1241	-.1157	-.1298	-.1420	-.1207	-.0945	-.0580

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
60.000							.1067		
70.000							.0360	.1099	.0000
80.000							-.0092	.0333	.0052
90.000	-.3176	-.2455	-.1727	-.1510	-.1263	.0000	-.0374	-.0079	-.0256
100.000	-.2324	-.1745	-.1274	-.1054	-.1038	-.1087			
110.000	-.1927	-.1343	-.0958	-.0773	-.0913	-.1886			
120.000						-.2680			
130.000						-.1771			
140.000						-.0744			
150.000						.0098			
160.000						.0672			
170.000						.1563			
180.000	-.1665	.0319	.0561	.1106	.1726	.1350			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC008)

MACH (2) = .751 ALPHA (4) = 12.630

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI														
60.000	-.0877	-.0565	-.1628											
70.000	-.0485	-.0541	-.1713											
80.000	-.0629	-.0389	-.1644											
90.000		-.1591	-.3821	-.5057	-.3022	-.2379	.0000	-.2052	-.2592	-.2134	-.2086	-.1584	-.1168	-.1839
100.000					-.3256	-.2763	-.2715	-.2297	-.1099	-.1889	-.1988	-.1584	-.2215	-.1576
110.000					-.3253	-.3202	-.3005	-.2387	-.1916	-.1873	-.1754	-.1547	.0000	-.1500
120.000					-.3552								.0000	
130.000					-.4716								-.1065	
140.000					-.4868								-.0951	
150.000					-.5500								-.0773	
160.000					-.5630								-.0606	
170.000					-.5971								-.0662	
180.000					-.6203	-.4441	-.2614	-.1809	-.0928	-.0861	-.0720	-.0620	-.0492	-.0332
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6880	.7100
PHI														
90.000	-.1521	-.1654	-.1823	-.1490	-.1551	-.1861	-.1695	-.2147	-.2564	-.3193	-.3695	-.4412	-.4939	-.5178
100.000	-.1759	-.1863	-.1890	-.1601	-.1564	-.1969	-.2061	-.2117	-.1999	-.2843	-.3334	-.4044	-.4297	-.3824
110.000	-.1728	-.1484	-.1474	-.1675	-.1606	-.1823	-.1894	-.1988	-.1980	-.2257	-.2918	-.3337	-.2939	-.2359
120.000					-.1307								-.2074	
130.000					-.1657								-.2017	
140.000					-.1445								-.1687	
150.000					-.0880								-.1300	
160.000					-.0931								-.1195	
170.000					-.0942								-.1155	
180.000	-.0819	-.0976	-.1092	-.0962	-.1108	-.0977	-.1173	-.1308	-.1501	-.1614	-.1725	-.1577	-.1518	-.1297
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000							.0380							
70.000							.0087	.0819	.0000					
80.000							-.0349	.0164	.0041					
90.000	-.3688	-.2746	-.2353	-.1845	-.1843	.0000	-.0833	-.0210	-.0306					
100.000	-.2728	-.2254	-.1741	-.1599	-.1942	-.2015								
110.000	-.2297	-.1623	-.1327	-.1179	-.1767	-.2684								
120.000					-.3157									
130.000					-.2435									
140.000					-.0772									
150.000					.0183									
160.000					.0553									
170.000					.1347									
180.000	-.1663	-.0010	.0690	.1031	.1301	.1152								

TABULATED SOURCE DATA - 1A29/0A63

DATE 24 MAR 74

(RECON8)

AMES 60-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (2) = .753 ALPHA (6) = 16.850

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
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PHI

60.000	-.1215	-.0883	-.1512												
70.000	-.1382	-.0915	-.1411												
80.000	-.1042	-.0840	-.1750												
90.000		-.1573	-.3593	-.6065	-.3570	-.3336	-.0000	-.2845	-.3540	-.2991	-.2970	-.2520	-.1780	-.2515	
100.000					-.3599	-.3487	-.3354	-.2948	-.2601	-.2877	-.2776	-.2618	-.2610	-.2245	
110.000						-.3843	-.4036	-.3845	-.3447	-.3277	-.2619	-.2475	-.2390	-.2245	
120.000						-.4223									
130.000						-.5595									
140.000						-.5824									
150.000						-.6652									
160.000						-.6694									
170.000						-.6267									
180.000						-.6617	-.5055	-.3293	-.2245	-.1341	-.0948	-.1166	-.0693	-.0609	-.0923

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PHI

90.000	-.1928	-.2288	-.2349	-.2354	-.2410	-.2586	-.2727	-.3272	-.3444	-.4554	-.5304	-.6076	-.6697	-.8464	.0000
100.000	-.2115	-.2523	-.2343	-.2227	-.2111	-.2439	-.2620	-.3081	-.2888	-.4299	-.3689	-.5081	-.5197	-.4789	-.4685
110.000	-.2402	-.1887	-.2071	-.2309	-.1984	-.2457	-.2143	-.2078	-.2639	-.2937	-.3469	-.3865	-.4248	-.4069	-.3447
120.000						-.1990								-.2600	
130.000						-.2314								-.2370	
140.000						-.2341								-.2619	
150.000						-.1499								-.1679	
160.000						-.1408								-.1424	
170.000						-.1295								-.1555	
180.000	-.0865	-.1110	-.1092	-.1081	-.1330	-.1346	-.1741	-.1451	-.1652	-.1891	-.2118	-.1912	-.1802	-.1874	-.1471

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI

60.000									
70.000									
80.000									
90.000	-.5599	-.4773	-.3791	-.4210	-.4207	.0000			
100.000	-.3906	-.3682	-.3234	-.3007	-.3815	-.4137			
110.000	-.2618	-.2423	-.1943	-.2487	-.3519	-.4713			
120.000						-.4193			
130.000						-.2674			
140.000						-.1454			
150.000						-.0216			
160.000						.0888			
170.000						.1809			
180.000	-.2890	-.0695	-.0215	.0437	.1342	.0158			

-.0537
-.1366 .0142 .0000
-.2520 -.1211 -.0361
-.2378 -.1403 -.0769

CASE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OA63

(RECORD)

AMES 68-410 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACM} (3) = .051 \quad \text{ALPHA} (1) = 6.431$$

SECTION / 115151 AGE

X/L	.04370	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
FMI															
60.000	-.0365	-.0397	-.1500												
70.000	.0057	-.0152	-.1453												
80.000	.0042	-.0557	-.1411												
90.000			-.1640	-.4827	-.6690	-.3828	-.2256	.0000	-.1801	-.1685	-.1317	-.1308	-.0878	-.0521	-.0927
100.000						-.3749	-.2386	-.2248	-.1858	-.1504	-.1079	-.1001	-.0861	-.1066	-.0665
110.000						-.4545	-.2847	-.2783	-.2066	-.1516	-.0983	-.0885	-.0658	.0000	-.0467
120.000						-.4756								.0000	
130.000						-.5139								-.0519	
140.000						-.5942								-.0311	
150.000						-.6338								-.0072	
160.000						-.6561								-.0194	
170.000						-.6591								-.0165	
180.000						-.6740	-.6219	-.5026	-.4009	-.2066	-.1293	-.0731	-.0262	-.0189	-.0121

PHI	-0.021	-0.0331	-0.0368	-0.0380	-0.0451	-0.0454	-0.0682	-0.0739	-0.0895	-0.0952	-0.1160	-0.1071	-0.1150	-0.0847	-0.0503
90.000	-0.0521	-0.0683	-0.0644	-0.0375	-0.0363	-0.0490	-0.0501	-0.0647	-0.0967	-0.1547	-0.1998	-0.2753	-0.3472	-0.3638	0.0000
100.000	-0.0612	-0.0866	-0.0653	-0.0536	-0.0297	-0.0378	-0.0722	-0.0776	-0.0796	-0.1636	-0.1716	-0.2517	-0.2906	-0.2852	
110.000	-0.0551	-0.0482	-0.0514	-0.0490	-0.0336	-0.0653	-0.0598	-0.0608	-0.0801	-0.1066	-0.1668	-0.2137	-0.2251	-0.2398	-0.2263
120.000						-0.0443								-0.1460	
130.000						-0.0563								-0.1118	
140.000						-0.0636								-0.1090	
150.000						-0.0367								-0.0835	
160.000						-0.0375								-0.0798	
170.000						-0.0375								-0.0857	
180.000	-0.0211	-0.0331	-0.0368	-0.0380	-0.0451	-0.0454	-0.0682	-0.0739	-0.0895	-0.0952	-0.1160	-0.1071	-0.1150	-0.0847	-0.0503
/L	0.7290	0.7470	0.7670	0.7850	0.8030	0.8290	0.8620	0.9000	0.9400						

[illegible]

MACM (3) - .050 ALPHA (2) = 8.560

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORDS)

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

[illegible]

JAMES 06-030 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

$$\text{MACH} (3) = .855 \quad \text{ALPHA} (3) = 10.750$$

SECTION () FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1840	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI															
60.000	-.0453	-.0287	-.1121												
70.000	-.0193	-.0009	-.1070												
80.000	-.0036	-.0373	-.1321												
90.000			-.1026	-.4044	-.6489	-.4958	-.2695	.0000	-.2126	-.2563	-.2275	-.2070	-.1496	-.1166	-.1588
100.000						-.5217	-.2773	-.2715	-.2488	-.2040	-.1845	-.2011	-.1644	-.1841	-.1165
110.000						-.4782	-.2969	-.3321	-.2734	-.2023	-.1862	-.1778	-.1306	.0000	-.1087
120.000						-.5022								.0000	
130.000						-.5225								-.0846	
140.000						-.5985								-.0674	
150.000						-.6470								-.0667	
160.000						-.6560								-.0304	
170.000						-.6504								-.0308	
180.000						-.6707	-.6506	-.5594	-.4037	-.2842	-.1889	-.1579	-.0912	-.0350	-.0212
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	-.1029	-.1247	-.1172	-.0956	-.0627	-.1189	-.0936	-.1126	-.1459	-.2163	-.2869	-.3679	-.4452	-.4871	.0000
100.000	-.1155	-.1364	-.1206	-.0946	-.0953	-.1264	-.1165	-.1284	-.1304	-.2306	-.2509	-.3363	-.4081	-.4074	-.4342
110.000	-.1233	-.1075	-.0849	-.0990	-.1036	-.1247	-.0993	-.1175	-.1326	-.1696	-.2462	-.2968	-.3237	-.3304	-.3367
120.000						-.0982								-.2299	
130.000						-.1081								-.2304	
140.000						-.0859								-.1825	
150.000						-.0526								-.1571	
160.000						-.0558								-.1519	
170.000						-.0521								-.1448	
180.000	-.0420	-.0428	-.0471	-.0613	-.0763	-.0773	-.0869	-.1027	-.1210	-.1284	-.1732	-.1611	-.1576	-.1406	-.1055
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PMI															
60.000							.0404								
70.000							-.0276	.0595	.0000						
80.000							-.0371	-.0087	-.0134						
90.000							-.1025	-.0466	-.0578						
100.000	-.5643	-.3807	-.2680	-.2243	-.2464	.0000									
110.000	-.4415	-.3080	-.2083	-.1796	-.2258	-.2830									
120.000	-.3156	-.2132	-.1514	-.1246	-.2359	-.3486									
130.000						-.3802									
140.000						-.2118									
150.000						-.0694									
160.000						-.0160									
170.000						-.0446									
180.000						-.1231									
X/L	.9382	.9594	.9824	.9781	.9164	.9169									

(RECORD)

AMES 60-030 PRESSURE VENTING - SHUTTLE ORBITER

MACH (3) = .652 ALPHA (4) = 12.775

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PMI

80.000 -.0507 -.0247 -.1130
 90.000 -.0333 -.0066 -.1032
 100.000 -.0365 -.0095 -.1044
 110.000 -.0946 -.3717 -.6258
 120.000 -.5125 -.2615 .0000 .2568
 130.000 -.4703 -.2681 -.2823 -.2961
 140.000 -.4353 -.3059 -.3708 -.3338
 150.000 -.4031
 160.000 -.3179
 170.000 -.6106
 180.000 -.6719
 190.000 -.6714
 200.000 -.6817
 210.000 -.6817
 220.000 -.8550
 230.000 -.6001
 240.000 -.4780
 250.000 -.3463
 260.000 -.2862
 270.000 -.1746
 280.000 -.1146
 290.000 -.0641
 300.000 -.0465

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PMI

90.000 -.1490 -.1609 -.1594 -.1172 -.1043
 100.000 -.1583 -.1663 -.1589 -.1256 -.1111
 110.000 -.1541 -.1309 -.1140 -.1236 -.1238
 120.000 -.1094
 130.000 -.1399
 140.000 -.1159
 150.000 -.0713
 160.000 -.0612
 170.000 -.0612
 180.000 -.0612
 190.000 -.0877
 200.000 -.0874
 210.000 -.0862
 220.000 -.0874
 230.000 -.0877
 240.000 -.1057
 250.000 -.1206
 260.000 -.1404
 270.000 -.1538
 280.000 -.1725
 290.000 -.1997
 300.000 -.1720
 310.000 -.1624
 320.000 -.1068

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

80.000 -.0789
 90.000 -.1376
 100.000 .0249
 110.000 -.0853
 120.000 -.0245
 130.000 -.1698
 140.000 -.1666
 150.000 -.1502
 160.000 -.1624
 170.000 -.1068

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0483

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

(RECO08)

MACH (3) = .634 ALPHA (5) = 14.930

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L .0470 .1200 .1640 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 -.0870 -.0304 -.1091
70.000 -.0511 -.0203 -.0922
80.000 -.0590 -.0145 -.0870
90.000 -.0726 -.3077 -.8186
100.000
110.000
120.000
130.000
140.000
150.000
160.000
170.000
180.000

X/L

PHI

90.000
100.000
110.000
120.000
130.000
140.000
150.000
160.000
170.000
180.000

X/L

PHI

60.000
70.000
80.000
90.000
100.000
110.000
120.000
130.000
140.000
150.000
160.000
170.000
180.000

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 80-030 PRESSURE VENTING - SHUTTLE ORBITER

(RECD008)

MACH (3) = .850 ALPHA (6) = 16.930

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI														
90.000	-.0772	-.0499	-.1269											
70.000	-.0915	-.0320	-.1104											
80.000	-.0944	-.0317	-.1021											
90.000		-.0713	-.2929	-.6116										
100.000					-.5425	-.2856	.0000	-.3367	-.4410	-.4319	-.3301	-.2699	-.2002	-.2817
110.000					-.4604	-.2762	-.3404	-.3606	-.4378	-.3943	-.3163	-.2721	-.3116	-.2337
120.000					-.3799	-.3271	-.4243	-.4710	-.5216	-.3350	-.3115	-.2536	.0000	-.2656
130.000					-.3989									
140.000					-.5127								-.1698	
150.000					-.6136								-.1407	
160.000					-.6932								-.1444	
170.000					-.6849								-.0690	
180.000					-.6804								-.0599	
190.000					-.6819	-.6793	-.6131	-.5005	-.4336	-.3276	-.2205	-.1471	-.1160	-.0604
200.000														

X/L	.4900	.4680	.4880	.9030	.5240	.5460	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
90.000	-.2391	-.2113	-.2051	-.1905	-.1975	-.2379	-.2616	-.3103	-.4253	-.4612	-.5593	-.6571	-.7187	.0000
100.000	-.2109	-.2157	-.2083	-.1841	-.1755	-.2042	-.2425	-.2363	-.3632	-.3872	-.4858	-.5697	-.5963	-.6364
110.000	-.2142	-.1890	-.1829	-.1777	-.1792	-.1909	-.2102	-.2368	-.2877	-.3390	-.3927	-.4182	-.4878	-.4833
120.000						-.1608							-.3356	
130.000						-.2159							-.3212	
140.000						-.1916							-.3087	
150.000						-.1091							-.2420	
160.000						-.1007							-.1829	
170.000						-.0808							-.1963	
180.000	-.0716	-.0769	-.0808	-.1011	-.1094	-.1310	-.1534	-.1928	-.2122	-.2087	-.2365	-.2514	-.2429	-.1630
190.000														

X/L .7290 .7470 .7670 .7850 .8030 .8290 .9030 .9400

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.9030	.9400
PMI								
90.000								
70.000								
80.000								
90.000	-.7456	-.5700	-.3877	-.4188	-.5292	.0000		
100.000	-.5803	-.5941	-.3001	-.5206	-.4196	-.5537		
110.000	-.5789	-.2806	-.2905	-.2272	-.3159	-.5668		
120.000						-.3698		
130.000						-.1927		
140.000						-.1532		
150.000						-.0122		
160.000						.0953		
170.000						.1910		
180.000	-.4114	-.1104	-.0341	.0091	.0582	.0166		

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 86-830 PRESSURE VENTING - SHUTTLE ORBITER (RECD08)

MACH (4) = .954 ALPHA (1) = 6.476

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4090 .4310

PMI

80.000 .0109 .0303 -.0601
90.000 .0544 .0251 -.0904
80.000 .0648 .0241 -.0479
90.000 -.0598 -.3588 -.6040 -.6155 -.5575 .0000 -.4839 -.5306 -.2806 -.1941 -.0516 -.0102 -.0095
100.000 -.6313 -.6208 -.5715 -.4818 -.3504 -.3530 -.1876 -.0905 -.0379 .0250
110.000 -.7221 -.6893 -.6587 -.4236 -.3390 -.3491 -.1852 -.0770 .0000 .0340
120.000 -.7189
130.000 -.7453
140.000 -.9613
150.000 -.6104
160.000 -.7152
170.000 -.6607
180.000 -.7198 -.5789 -.4609 -.4413 -.3358 -.2622 -.1001 -.0264 .0327 .0438

X/L

.4900 .4680 .4880 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PMI

80.000 .0310 .0210 .0192 .0302 .0380 .0199 .0460 .0318 .0015 -.0550 -.1007 -.1787 -.2600 -.3034 .0000
100.000 .0363 .0199 .0176 .0307 .0394 .0206 .0263 .0183 .0123 -.0680 -.0854 -.1590 -.2235 -.2395 -.2887
110.000 .0427 .0484 .0436 .0408 .0356 .0219 .0389 .0270 .0054 -.0235 -.0833 -.1348 -.1773 -.2077 -.2225
120.000 .0344
130.000 .0431
140.000 .0417
150.000 .0621
160.000 .0571
170.000 .0545
180.000 .0546 .0578 .0530 .0473 .0413 .0449 .0348 .0123 -.0049 -.0237 -.0543 -.0766 -.0912 -.0914 -.0345

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

80.000 .0592
90.000 .0001 .1189 .0000
80.000 -.0603 .0534 .0449
90.000 -.3878 -.1960 -.2486 -.2437 -.2709 .0000
100.000 -.3727 -.2850 -.1847 -.1729 -.2416 -.3088
110.000 -.2034 -.2050 -.0471 -.1071 -.2063 -.4203
120.000 -.4062
130.000 -.1659
140.000 .0180
150.000 .1109
160.000 .1226
170.000 .1668
180.000 -.1987 .0281 .1304 .1784 .2224 .2013

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER (RECD008)

MACH (4) = .940 ALPHA (2) = 0.042

SECTION (1) FUSELAGE DEFICENT VARIABLE CP

X/L .0870 .1200 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PMI

60.000 .0012 .0123 -.0049
 70.000 .0346 .0334 -.0372
 80.000 .0399 .0227 -.0451
 90.000 .0353 -.3506 -.6197
 100.000 .0197 -.5894 -.4963 .0000 -.4764 -.5134 -.4602 -.3732 -.1512 -.2217 -.1374
 110.000 .0179 -.6179 -.5296 -.5521 -.5110 -.3847 -.3402 -.2394 -.1563 -.1719 -.1107
 120.000 .0517 -.5625 -.5410 -.5195 -.3623 -.2908 -.1977 -.1673 .0000 -.1215
 130.000 .5656
 140.000 .5681
 150.000 .5825
 160.000 .6180
 170.000 .6234
 180.000 .6551
 190.000 .6602
 200.000 .6105 -.4975 -.4176 -.3029 -.1949 -.3677 -.2053 -.2599 -.1512

X/L

.4500 .4600 .4800 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PMI

90.000 -.0818 -.0875 -.0107 .0159 .0240 .0113 -.0093 -.0185 -.0458 -.1129 -.1434 -.2118 -.2960 -.3316 .0000
 100.000 -.0199 -.0774 -.0044 .0164 .0287 .0078 .0290 -.0332 -.0351 -.1243 -.1173 -.1932 -.2572 -.3372
 110.000 -.0873 -.0572 .0264 .0321 .0340 .0223 .0164 -.0255 -.0428 -.0720 -.1161 -.1628 -.2102 -.2353 -.2894
 120.000 .0294
 130.000 -.0093
 140.000 .0152
 150.000 .0314
 160.000 .0344
 170.000 .0277
 180.000 .0525 .0521 .0155 .0037 -.0130 -.0236 -.0727 -.1014 -.1201 -.1280 -.0905

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

60.000 -.0221
 70.000 .0767 .0780 .0000
 80.000 .1350 .0104 .0361
 90.000 .4515 -.3451 -.3233 -.3108 -.3670 .0000
 100.000 .3747 -.4116 -.2471 -.2343 -.3266 -.4044
 110.000 .2650 -.2406 -.1564 -.1725 -.2636 -.4863
 120.000 .4502
 130.000 .2238
 140.000 .0041
 150.000 .1277
 160.000 .1435
 170.000 .2099
 180.000 .2773 -.0227 .0321 .0773 .1351 .1837

DATE 24 MAR 74 TABULATED SOURCE DATA - 1429/0463

(RECORD)

AMES 86-830 PRESSURE VENTING - SHUTTLE ORBITER

MACH (4) = .955 ALPHA (3) = 10.783

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0470 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PMI

60.000 .0046 .0356 -.0377
70.000 .0335 -.0202
80.000 .0404 .0434
90.000 -.0113 -.3084 -.5746 -.5640 -.4773 .0000 -.3703 -.4095 -.4389 -.3859 -.3710 -.1487 -.0297
100.000 .0000 .0000
110.000 .0000 .0000
120.000 .0000 .0000
130.000 .0000 .0000
140.000 .0000 .0000
150.000 .0000 .0000
160.000 .0000 .0000
170.000 .0000 .0000
180.000 .0000 .0000

X/L

.4570 .4660 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PMI

90.000 -.0215 -.0482 -.0612 -.0442 -.0030 -.0394 .0039 -.0245 -.0442 -.1125 -.1732 -.2466 -.3243 -.3839 .0000
100.000 -.0432 -.0391 -.0639 -.0506 .0076 .0405 -.0259 -.0382 -.0217 -.1216 -.1469 -.2267 -.2872 -.3164 -.4002
110.000 -.1090 -.0780 -.0804 -.0463 .0060 .0330 -.0173 -.0252 -.0250 -.0641 -.1421 -.2005 -.2302 -.2719 -.3202
120.000 .0000 .0000
130.000 .0000 .0000
140.000 .0000 .0000
150.000 .0000 .0000
160.000 .0000 .0000
170.000 .0000 .0000
180.000 .0000 .0000

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

60.000 .0000
70.000 .0000
80.000 .0000
90.000 .0000
100.000 .0000
110.000 .0000
120.000 .0000
130.000 .0000
140.000 .0000
150.000 .0000
160.000 .0000
170.000 .0000
180.000 .0000

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(RECORD)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACN (4) = .950 ALPHA (4) = 12.850

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.3010	.3190	.3360	.3370	.3750	.3940	.4050	.4310
PMI														
60.000	-.0143	.0256	-.0379											
70.000	.0134	.0439	-.0245											
80.000	.0745	.0821	-.0155											
90.000		-.0931	-.2836	-.5596	-.5585	-.4564	.0000	-.3768	-.3938	-.4266	-.3943	-.2827	-.2978	-.2939
100.000				-.5564	-.4857	-.4266	-.3574	-.3696	-.3839	-.3731	-.3332	-.3324	-.3121	-.1608
110.000				-.5894	-.4901	-.4492	-.4174	-.3892	-.3826	-.3245	.0000	.0000	.0000	-.1603
120.000				-.5499									-.2439	
130.000				-.5739									-.2470	
140.000				-.5850									-.2680	
150.000				-.6074									-.2471	
160.000				-.6286									-.2719	
170.000				-.6438									-.2464	-.1594
180.000				-.6175	-.6354	-.6202	-.6047	-.5555	-.4829	-.3915	-.2985	-.2464	-.2464	
X/L	.4900	.4690	.4630	.5050	.5240	.5460	.5610	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
90.000	-.1351	-.1194	-.1190	-.0728	-.0616	-.0675	-.0483	-.0647	-.0657	-.2143	-.3112	-.3827	-.4317	.0000
100.000	-.1119	-.1222	-.1107	-.0740	-.0551	-.0658	-.0600	-.0696	-.0663	-.1621	-.1845	-.2774	-.3394	-.4583
110.000	-.1327	-.1068	-.0645	-.0726	-.0581	-.0574	-.0498	-.0530	-.0714	-.1041	-.1747	-.2409	-.2744	-.3756
120.000						-.0381							-.2390	
130.000						-.0491							-.2353	
140.000						-.0235							-.2080	
150.000						.0196							-.1815	
160.000						.0325							-.1628	
170.000						.0311							-.1596	
180.000	-.0881	-.0480	-.0799	.0065	.0072	.0126	.0002	-.0181	-.0414	-.0666	-.1013	-.1286	-.1589	-.1661
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PMI														
60.000							-.1854							
70.000							-.2841	-.1347	.0000					
80.000							-.3474	-.2468	-.0772					
90.000	-.5548	-.4821	-.5114	-.4649	-.4914	.0000	-.4354	-.3064	-.1088					
100.000	-.4872	-.5526	-.5938	-.5517	-.4184	-.5661								
110.000	-.5890	-.5545	-.5549	-.2606	-.3481	-.5958								
120.000						-.4313								
130.000						-.2028								
140.000						-.0633								
150.000						.0079								
160.000						.0640								
170.000						.1392								
180.000	-.0655	-.1851	-.0227	.0343	.0963	.0903								

TABULATED SOURCE DATA - 1A29/OA63

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

(RECORDS)

MACH (4) = .950 ALPHA (5) = 14.990

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
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PHI														
60.000	-.0316	.0213	-.0329											
70.000	-.0143	.0368	-.0193											
80.000	-.0036	.0352	-.0065											
90.000		.0081	-.2571	-.3363	-.3292	-.4511	.0000	-.3730	-.4216	-.4279	-.4306	-.3931	-.3626	-.3436
100.000					-.5259	-.4756	-.4276	-.3923	-.4006	-.3884	-.4477	-.4131	-.3861	-.2764
110.000					-.5741	-.5074	-.4689	-.4392	-.4666	-.4622	-.4613	-.3844	.0000	-.2258
120.000					-.5921								.0000	
130.000					-.5704								-.2486	
140.000					-.5951								-.2495	
150.000					-.6126								-.2428	
160.000					-.6080								-.2485	
170.000					-.6244								-.2635	
180.000					-.6223	-.6430	-.6511	-.6098	-.5604	-.4760	-.4172	-.3008	-.2646	-.1405

X/L	.4530	.4680	.4880	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PHI															
90.000	-.1921	-.0851	-.1103	-.1209	-.0863	-.0993	-.0972	-.1181	-.1405	-.2037	-.2693	-.3667	-.4456	-.5047	.0000
100.000	-.1979	-.0964	-.1186	-.1027	-.0518	-.0883	-.0949	-.0995	-.0979	-.1992	-.2188	-.3173	-.3785	-.4128	-.5032
110.000	-.1092	-.0929	-.1018	-.0821	-.0592	-.0773	-.0762	-.0702	-.0888	-.1247	-.2321	-.2693	-.3057	-.3546	-.4249
120.000						-.0320								-.2679	
130.000						-.0774								-.2654	
140.000						-.0483								-.2610	
150.000						.0139								-.2279	
160.000						.0297								-.2018	
170.000						.0270								-.2051	
180.000	-.1011	-.0341	-.0211	.0080	.0084	.0040	-.0134	-.0306	-.0363	-.0928	-.1352	-.1669	-.1965	-.2214	-.2102

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
60.000							-.2451		
70.000							-.3706	-.2117	.0000
80.000							-.4843	-.3715	-.1327
90.000	-.6315	-.5817	-.6002	-.5553	-.5743	.0000	-.5954	-.4407	-.1596
100.000	-.6019	-.6056	-.4754	-.4360	-.4930	-.6093			
110.000	-.4219	-.4041	-.3151	-.3100	-.3930	-.6397			
120.000						-.4220			
130.000						-.2214			
140.000						-.1082			
150.000						-.0036			
160.000						.0709			
170.000						.1648			
180.000	-.4333	-.1363	-.0664	-.0018	.0769	.0688			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (4) = .990 ALPHA (6) = 17.540

DEFENDENT VARIABLE CP

PM1	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4311
60.000	-.0448	.0116	-.0377												
70.000	-.0448	.0232	-.0185												
80.000	-.0402	.0079	-.0035												
90.000			.0111	-.2280	-.5096	-.5117	-.4474	.0000	-.3954	-.4488	-.4428	-.4483	-.4840	-.3830	-.4099
100.000						-.5113	-.4640	-.4402	-.4137	-.4365	-.4587	-.4746	-.4741	-.5228	-.3761
110.000						-.3584	-.5178	-.4935	-.4845	-.5150	-.5249	-.5237	-.4982	.0000	-.3035
120.000						-.5819								.0000	
130.000						-.6051								-.2828	
140.000						-.6171								-.2539	
150.000						-.6575								-.2672	
160.000						-.6459								-.2447	
170.000						-.6129								-.2146	
180.000						-.6221	-.6454	-.6694	-.6094	-.5919	-.4806	-.3872	-.2803	-.2387	-.1412

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0A63

CABL

AMES 68-630 PRESSURE VENTING - SHUTTLE ORBITER (REC008)

MACH (3) = 1.060 ALPHA (2) = 8.681

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4090	.4310
PHI														
60.000	.1409	.1690	.1022											
70.000	.1826	.1913	.1207											
80.000	.1843	.1805	.1256											
90.000		.1224	-.1515	-.3938	-.4089	-.3542	.0000	-.3166	-.3567	-.3627	-.3778	-.3555	-.2298	-.2433
100.000					-.4091	-.4105	-.3754	-.3516	-.3631	-.3810	-.4103	-.3139	-.2833	-.1901
110.000					-.4898	-.4770	-.4515	-.4234	-.4483	-.4549	-.3255	-.2414	.0000	-.1603
120.000					-.5089								.0000	
130.000					-.6992								-.1307	
140.000					-.7884								-.1151	
150.000					-.7085								-.0982	
160.000					-.5641								-.0975	
170.000					-.5099								-.0971	
180.000					-.5537	-.4617	-.4177	-.3863	-.3489	-.2741	-.1901	-.1248	-.0973	-.0631

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.1787	-.1763	-.1927	-.1205	-.0637	.0791	.1132	.1166	.1037	.0543	-.0124	-.0593	-.1443	-.1896
100.000	-.1637	-.1680	-.1549	-.1110	-.0345	.0664	.0975	.1005	.1054	.0394	.0047	-.0375	-.1141	-.1420
110.000	-.1448	-.1284	-.1095	-.0880	-.0353	.0639	.0912	.1094	.0995	.0737	.0122	-.0315	-.0652	-.1115
120.000						.0413							-.0523	
130.000						.0407							-.0482	
140.000						.0545							-.0210	
150.000						.0736							-.0107	
160.000						.0730							-.0041	
170.000						.0573							-.0090	
180.000	-.0851	-.0837	-.0516	-.0499	-.0283	.0373	.0651	.0827	.0797	.0445	.0203	.0009	-.0163	-.0099

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
60.000							.0154		
70.000							-.0667	.1341	.0000
80.000							-.1475	.0776	.1326
90.000	-.3039	-.2561	-.2063	-.1700	-.1896	.0000	-.2275	.0387	.1039
100.000	-.2427	-.2263	-.1184	-.0856	-.1464	-.2720			
110.000	-.1792	-.1178	-.0236	-.0153	-.0984	-.3166			
120.000						-.2339			
130.000						-.0285			
140.000						.1771			
150.000						.2567			
160.000						.2831			
170.000						.3613			
180.000	-.1780	.1057	.1961	.2660	.3171	.2715			

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OA63

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (5) = 1.033 ALPHA (3) = 10.060

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .1078 .1473 .0793
 70.000 .1400 .1861 .0964
 80.000 .1493 .1378 .1083
 90.000 .1146 -.1587 -.4148
 100.000 -.4223 -.3994 -.3663
 110.000 -.5009 -.4596 -.4382
 120.000 -.5393
 130.000 -.7403
 140.000 -.8571
 150.000 -.7730
 160.000 -.6243
 170.000 -.5677
 180.000 -.6087

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100
 90.000 -.2737 -.2355 -.2404
 100.000 -.2406 -.2149 -.1966
 110.000 -.1920 -.1612 -.1423
 120.000 .0564
 130.000 .0591
 140.000 .0930
 150.000 .1090
 160.000 .1064
 170.000 .1177
 180.000 -.0719
 190.000 -.0719

PHI

60.000 .0517
 70.000 .1909
 80.000 .2893
 90.000 .3543
 100.000 .3205
 110.000 .2322
 120.000 .2552
 130.000 .0852
 140.000 .1674
 150.000 .2612
 160.000 .3033
 170.000 .3932
 180.000 .2870

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACH} (3) = 1.055 \quad \text{ALPHA} (4) = 12.070$$

SECTION (1) FUSELAGE

[illegible]

(RECORD)

JAMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACH} (5) = 1.047 \quad \text{ALPHA} (5) = 15.050$$

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0670	.1260	.1640	.2030	.2420	.2840	.2820	.3010	.3380	.3570	.3940	.4030	.4310
Phi													
60.000	.0707	.1322	.0661										
70.000	.0676	.1506	.1063										
80.000	.1000	.1626	.1210										
90.000		.1349	.1146	.3770	.3825	.3282	.0000	.3008	.3594	.3671	.3685	.3799	.2616
100.000					.3640	.3752	.3547	.3337	.3534	.3801	.4306	.4357	.4366
110.000					.4565	.4321	.4250	.4146	.4486	.4757	.4969	.4984	.3393
120.000					.5280							.0000	
130.000					.7525							.2901	
140.000					.9204							.1525	
150.000					.8393							.1036	
160.000					.6890							.0897	
170.000					.6169							.0912	
180.000					.6460	.5456	.4825	.4210	.3466	.2480	.1710	.1123	.0576
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.7100
Phi													
90.000	.4240	.3745	.3101	.2168	.1112	.0897	.0580	.0038	.0222	.0775	.1934	.2817	.3285
100.000	.3710	.2907	.2235	.1342	.0016	.0596	.0652	.0165	.0274	.0384	.1457	.2316	.2566
110.000	.2669	.2031	.1265	.0671	.0544	.0983	.0836	.0530	.0477	.0345	.0215	.0956	.1313
120.000						.0839						.1148	
130.000						.0026						.1351	
140.000						.0604						.1116	
150.000						.1278						.0890	
160.000						.1314						.0572	
170.000						.1395						.0554	
180.000	.0901	.0397	.0269	.0645	.0942	.1308	.1156	.1005	.0755	.0409	.0166	.0464	.1060
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400				
Phi													
60.000							.1665						
70.000							.3378	.11071	.0000				
80.000							.4713	.2113	.0180				
90.000	.4470	.4247	.4803	.4146	.4294	.0000							
100.000	.3983	.4667	.3401	.3049	.3655	.4866							
110.000	.3000	.3062	.2566	.1957	.2761	.5308							
120.000						.3395							
130.000						.1776							
140.000						.0781							
150.000						.2702							
160.000						.3234							
170.000						.3927							
180.000	.2998	.1141	.1219	.2137	.3251	.3309							

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A83

AVES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (0) = 1.100 ALPHA (1) = 6.826

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0470	.1200	.1840	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4090	.4310
PMI															
60.000	.1636	.1946	.1231												
70.000	.2054	.2148	.1453												
80.000	.2139	.1904	.1462												
90.000		.1281	-.1413	-.3632	-.3813	-.3093	.0000	-.2719	-.2864	-.2991	-.2978	-.2198	-.1224	-.1457	
100.000					-.3846	-.3724	-.3398	-.2985	-.3066	-.3187	-.2461	-.1593	-.1416	-.0865	
110.000					-.4699	-.4309	-.4181	-.3792	-.3786	-.2889	-.1889	-.1352	.0000	-.0347	
120.000					-.4697									.0000	
130.000					-.6479									-.0493	
140.000					-.7034									-.0443	
150.000					-.6180									-.0379	
160.000					-.4909									-.0402	
170.000					-.4511									-.0466	
180.000					-.4762	-.3701	-.3363	-.3107	-.2821	-.2210	-.1478	-.0759	-.0574	-.0053	
X/L	.4500	.4680	.4680	.5050	.5240	.5480	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100	

X/L	.4500	.4680	.4680	.5050	.5240	.5480	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
60.000	-.0720	.0012	.0512	.1336	.1535	.1670	.1764	.1615	.1530	.0991	.0737	.0157	-.0447	-.0980
70.000	-.0443	-.0049	.0560	.1250	.1561	.1637	.1501	.1561	.1623	.0929	.0864	.0358	-.0284	-.0512
80.000	-.0121	.0290	.0804	.1084	.1346	.1593	.1480	.1547	.1605	.1321	.0895	.0398	.0206	-.0286
90.000					.1514	.1514								.0287
100.000					.1615	.1615								.0418
110.000					.1580	.1580								.0590
120.000					.1760	.1760								.0582
130.000					.1632	.1632								.0671
140.000					.1648	.1648								.0646
150.000	.0276	.0400	.0754	.1142	.1419	.1497	.1422	.1408	.1335	.1182	.1150	.0951	.0779	.0596
160.000							.8620	.9000	.9400					.0764
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PMI									
60.000							.1419		
70.000							.0686	.2295	.0000
80.000							.0716	.1622	.1894
90.000	-.1999	-.0766	-.1051	-.0824	-.1201	.0000	-.0626	.1157	.1577
100.000	-.2749	-.1811	-.0214	-.0126	-.0807	-.1762			
110.000	-.0672	-.1036	.0627	.0507	-.0191	-.2246			
120.000						-.1606			
130.000						.0748			
140.000						.2349			
150.000						.3129			
160.000						.3100			
170.000						.3694			
180.000	-.0780	.1027	.2569	.3085	.3569	.3301			

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0483

70L 11.00

(RECORD)

AMES 64-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (0) = 1.102 ALPHA (2) = 0.000

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI														
80.000	.1849	.2061	.1465											
90.000	.2204	.2267	.1482											
100.000	.2193	.2166	.1465											
110.000		.1494	-.1171	-.3428	-.3692	-.3212	.0000	-.2868	-.3121	-.3191	-.3384	-.2761	-.1532	-.2009
120.000				-.3718	-.3770	-.3282	-.3193	-.3172	-.3440	-.3623	-.2227	-.2236	-.1340	
130.000				-.4456	-.4394	-.4122	-.3873	-.3938	-.4161	-.2316	-.1384	.0000	-.1227	
140.000				-.4618									-.0955	
150.000				-.6434									-.0633	
160.000				-.7238									-.0647	
170.000				-.6546									-.0616	
180.000				-.5232									-.0668	
190.000				-.4734									-.0672	.0021
200.000				-.5118	-.4238	-.3853	-.3853	-.3276	-.2627	-.1136	-.0517	-.0672	.0021	
X/L	.4500	.4680	.4860	.5030	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
90.000	-.1334	-.1321	-.1032	.0635	.1868	.1987	.1733	.1984	.1822	.1271	.0853	.0184	-.0325	.0000
100.000	-.1113	-.0894	-.0520	.0734	.1659	.1987	.1775	.1783	.1886	.1073	.1015	.0367	-.0221	-.0506
110.000	-.1049	-.0448	-.0174	.1027	.1645	.1906	.1922	.1926	.1777	.1499	.1102	.0602	.0219	-.0213
120.000				.1552		.1552							.0397	
130.000				.1367		.1367							.0457	
140.000				.1574		.1574							.0776	
150.000				.1725		.1725							.0776	
160.000				.1698		.1698							.0849	
170.000				.1690		.1690							.0843	
180.000	-.0180	.0232	.0218	.1166	.1303	.1565	.1779	.1801	.1673	.1537	.1313	.1189	.0930	.0336
X/L	.7290	.7470	.7670	.7830	.8030	.8290	.8620	.9000	.9400					
PMI														
80.000				.1067										
90.000				.0215	.2202	.0000								
100.000				-.0310	.1618	.2037								
110.000	-.2431	-.1847	-.1263	-.1007	-.1213	.0000	-.1138	.1125	.1709					
120.000	-.1856	-.1473	-.0422	-.0173	-.0739	.1910								
130.000	-.1292	-.0464	.0310	.0574	-.0180	.2326								
140.000						.1573								
150.000						.0538								
160.000						.2445								
170.000						.3212								
180.000						.3419								
190.000						.4217								
200.000	-.1325	.1647	.2637	.3209	.3815	.4217								

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(RECORD)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (6) = 1.104 ALPHA (3) = 10.790

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI														
60.000	.1308	.1603	.1171											
70.000	.1827	.2127	.1586											
80.000	.1691	.1982	.1758											
90.000		.1803	.1654	-.3317	-.3466	-.2967	.0000	-.2543	-.2959	-.3021	-.3155	-.3053	-.1987	-.3008
100.000				-.3413	-.3414	-.3110	-.2682	-.3039	-.3155	-.3155	-.3596	-.3504	-.3651	-.1645
110.000				-.4156	-.3964	-.3791	-.3613	-.3921	-.4066	-.3799	-.2773	.0000	.0000	-.1441
120.000				-.4512										
130.000				-.6374									-.1171	
140.000				-.7432									-.0916	
150.000				-.6728									-.0697	
160.000				-.5503									-.0526	
170.000				-.4923									-.0533	
180.000				-.5302	-.4283	-.3836	-.3600	-.3205	-.2321	-.1365	.0681	-.0664	-.0088	

X/L	.4500	.4630	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	-.2009	-.1211	-.0842	.1473	.2021	.1997	.2138	.2068	.1789	.1229	.0701	-.0070	-.0787	-.1284	.0000
100.000	-.1468	-.0683	.0058	.1456	.1974	.1901	.2008	.1975	.1698	.1167	.0860	.0112	-.0448	-.0764	-.1717
110.000	-.1192	-.0562	.0619	.1537	.1876	.1901	.2082	.2041	.1807	.1526	.0829	.0323	.0032	-.0417	-.1146
120.000						.1672								.0141	
130.000						.1741								.0120	
140.000						.2037								.0347	
150.000						.2305								.0531	
160.000						.2287								.0616	
170.000						.2314								.0579	
180.000	.0143	.0568	.1251	.1651	.1930	.2161	.2107	.2033	.1702	.1549	.1191	.0947	.0707	.0463	-.0458

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PMI									
60.000							.0199		
70.000							-.1187	.1445	.0000
80.000							-.2109	.0793	.1722
90.000	-.2507	-.2203	-.1923	-.1483	-.1601	.0220	-.2570	.0350	.1486
100.000	-.1965	-.2045	-.1744	-.0804	-.1165	-.2343			
110.000	-.1264	-.0832	.0100	.0150	-.0356	-.2859			
120.000						-.1768			
130.000						-.0012			
140.000						.2239			
150.000						.3176			
160.000						.3561			
170.000						.4443			
180.000	-.1287	-.1137	.2481	.3192	.3841	.3416			

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 68-030 PRESSURE VENTING - SHUTTLE ORBITER (RECU08)

NOM (0) = 1.101 ALPHA (0) = 17.100

SECTION 1 FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1200	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.1409	.2090	.1705											
70.000	.1346	.2265	.1911											
80.000	.1595	.2907	.2785											
90.000		.2209		-.0098	-.2545	-.2622	-.2144	.0000	-.1749	-.2445	-.2549	-.2767	-.2591	-.3344
100.000					-.2603	-.2547	-.2393	-.2131	-.2393	-.2686	-.3189	-.3232	-.3712	-.3410
110.000					-.3339	-.3127	-.3068	-.2927	-.3324	-.3625	-.3855	-.3950	.0000	-.2771
120.000					-.4100								.0000	
130.000					-.6360								-.3075	
140.000					-.8169								-.0515	
150.000					-.7520								.0175	
160.000					-.5963								.0250	
170.000					-.5056								.0310	
180.000					-.5362	-.4461	-.3754	-.2971	-.2129	-.1092	-.0370	.0146	.0333	.0699
X/L	.4500	.4680	.4860	.5050	.5240	.5480	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100

PHI														
60.000	.3087	-.3176	-.2411	-.1452	-.0562	.1000	.1426	.0361	-.0770	-.0950	-.1037	-.1769	-.2222	-.2856
70.000	-.2999	-.2332	-.1269	-.0794	.0324	.1614	.1457	.0907	.0698	-.0622	-.0663	-.1198	-.1525	-.1903
80.000	-.1649	-.1249	-.0496	.0154	.1214	.1691	.1667	.1329	.0864	.0378	-.0334	-.0571	-.0774	-.1219
90.000					.1480	.1480								-.0529
100.000					.0239	.0239								-.0659
110.000					.1092	.1092								-.0745
120.000					.1727	.1727								-.0397
130.000					.1814	.1814								-.0191
140.000					.1872	.1872								-.0191
150.000	.0594	.0857	.1094	.1273	.1526	.1802	.1713	.1638	.1345	.0990	.0667	.0237	-.0039	-.0799
160.000	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					

PHI														
60.000														
70.000														
80.000														
90.000	-.4292	-.4039	-.4740	-.4183	-.4290	.0000								
100.000	-.4058	-.4248	-.3505	-.3045	-.3496	-.4737								
110.000	-.2615	-.2946	-.2085	-.1780	-.2623	-.4960								
120.000					-.2903									
130.000					-.1148									
140.000					.0633									
150.000					.3327									
160.000					.3919									
170.000					.4347									
180.000	-.2594	-.1212	-.1926	.7730	.5909	.4558								

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/OA83

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (7) = 1.151 ALPHA (1) = 6.804

SECTION / 1) FUSELAGE		DEPENDENT VARIABLE CP													
X/L		.0870	.1260	.1640	.2030	.2420	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI															
60.000		.1335	.1349	.1345											
70.000		.1806	.2215	.1668											
80.000		.1920	.2054	.1695											
90.000			.1615	-.0983	-.3199	-.3476	-.3011	.0000	-.2800	-.2898	-.2916	-.3013	-.2830	-.2012	-.1984
100.000						-.3476	-.3555	-.3211	-.2916	-.2989	-.3076	-.3242	-.2366	-.2220	-.1637
110.000						-.4247	-.4075	-.3879	-.3622	-.3721	-.3565	-.2481	-.1905	.0000	-.1356
120.000						-.4219								.0000	
130.000						-.5871								-.1255	
140.000						-.6456								-.1255	
150.000						-.5749								-.1182	
160.000						-.4838								-.1201	
170.000						-.4320								-.1199	
180.000						-.4505	-.3646	-.3195	-.3035	-.2882	-.2534	-.2059	-.1502	-.1211	-.0766
X/L		.5500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.7100
PHI															
90.000		-.1413	-.1108	-.1157	-.0755	-.0588	-.0636	-.0207	.0302	.0718	.0586	.0217	-.0160	-.0687	-.1048
100.000		-.1283	-.1141	-.0974	-.0747	-.0552	-.0495	-.0412	.0172	.0667	.0448	.0292	-.0077	-.0477	-.0638
110.000		-.1047	-.0870	-.0703	-.0652	-.0596	-.0373	-.0268	.0125	.0458	.0576	.0300	.0077	-.0160	-.0368
120.000							-.0250							.0050	
130.000							-.0375							.0187	
140.000							-.0361							.0371	
150.000							-.0152							.0407	
160.000							-.0215							.0451	
170.000							-.0250							.0453	
180.000		-.0594	-.0523	-.0413	-.0407	-.0342	-.0348	-.0369	-.0307	-.0191	-.0096	.0187	.0304	.0342	.0613
X/L		.7590	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI															
60.000								.1168							
70.000								.0490	.1976	.0000					
80.000								-.0274	.1299	.2007					
90.000		-.2196	-.0097	-.1089	-.0908	-.1138	.0000	-.1326	.0751	.1734					
100.000		-.2172	-.1878	-.0596	-.0107	-.0702	-.1758								
110.000		-.1436	-.1354	.0446	.0497	-.0183	-.2037								
120.000							-.1157								
130.000							.1030								
140.000							.2662								
150.000							.3329								
160.000							.3353								
170.000							.3792								
180.000		-.1152	.0262	.2263	.2762	.3216	.3028								

MACH (7) = 1.191 ALPHA (2) = 0.702

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4090	.4310
PFI															
60.000	.1195	.1908	.1420												
70.000	.1617	.2196	.1656												
80.000	.1713	.2145	.1915												
90.000			.1913	-.0696	-.3024	-.3293	-.2812	.0000	-.2486	-.2857	-.2890	-.3040	-.2965	-.2202	-.2704
100.000						-.3297	-.3348	-.3028	-.2841	-.2918	-.3069	-.3427	-.3192	-.3111	-.2018
110.000						-.3985	-.3903	-.3734	-.3488	-.3684	-.3765	-.3475	-.2368	.0000	-.1568
120.000						-.4138								.0000	
130.000						-.5894								-.1339	
140.000						-.6724								-.1232	
150.000						-.5992								-.1097	
160.000						-.5068								-.1117	
170.000						-.4477								-.1113	
180.000						-.4787	-.3830	-.3407	-.3201	-.2979	-.2493	-.1961	-.1386	-.1115	-.0704
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PFI															
90.000	-.1866	-.1582	-.1671	-.1387	-.1126	-.0966	-.0645	-.0353	.0236	.0652	.0199	-.0138	-.0730	-.1155	.0000
100.000	-.1773	-.1507	-.1375	-.1221	-.1037	-.0846	-.0734	-.0394	.0374	.0516	.0368	-.0101	-.0586	-.0744	-.1539
110.000	-.1294	-.1108	-.1083	-.1035	-.0909	-.0800	-.0512	-.0298	.0248	.0583	.0278	.0027	-.0234	-.0514	-.1089
120.000						-.0674								-.0015	
130.000						-.0643								.0070	
140.000						-.0516								.0321	
150.000						-.0264								.0400	
160.000						-.0298								.0461	
170.000						-.0310								.0353	
180.000	-.0803	-.0549	-.0433	-.0466	-.0447	-.0438	-.0483	-.0446	-.0440	-.0300	-.0056	.0172	.0268	.0300	.0374
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PFI															
60.000							.0380								
70.000							-.0625	.1620	.0000						
80.000							-.1506	.0932	.1972						
90.000	-.2439	-.1924	-.1870	-.1351	-.1392	.0000	-.2156	.0309	.1760						
100.000	-.2429	-.2605	-.0949	-.0367	-.0934	-.2017									
110.000	-.1449	-.1661	.0089	.0236	-.0357	-.2274									
120.000						-.1218									
130.000						.0551									
140.000						.2615									
150.000						.3301									
160.000						.3509									
170.000						.4193									
180.000	-.1369	.0742	.2072	.2788	.3484	.4081									

MACH (7) = 1.154 ALPHA (3) = 10.770

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

[illegible]

TABULATED SOURCE DATA - 1A29/OA63

DATE 24 MAR 74

(RECORD)

JAMES 00-030 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{ALPHA} (4) = 1.149 \quad \text{ALPHA} (4) = 12.005$$

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

x/L	.0879	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
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[illegible][illegible][illegible]

PHI					
60.0000					.0662
60.0000					-.0629
70.0000					.0497
80.0000					-.0000
90.0000					-.1267
100.0000					-.2051
110.0000					-.0161
120.0000					-.0325
130.0000					-.0990
140.0000					-.2723
150.0000					-.0000
160.0000					-.2473
170.0000					-.2064
180.0000					-.1127
190.0000					-.1807
200.0000					-.2552
210.0000					-.2977
220.0000					-.1620
230.0000					-.0366
240.0000					.2738
250.0000					.3810
260.0000					.4221
270.0000					.3104
280.0000					.3826
290.0000					.4239
300.0000					.3143
310.0000					.1919
320.0000					.0479
330.0000					-.1874

TABULATED SOURCE DATA - 1A29/0A83

(RECORD)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (7) = 1.133 ALPHA (5) = 15.050

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0670 .1260 .1840 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .0373 .0977 .1802
70.000 .0175 .1265 .2272
80.000 .0200 .1458 .2295
90.000 .2417 .0037 -.2506
100.000 .2705 -.2343 .0000
110.000 -.2683 -.2760 -.2577
120.000 -.3307 -.3250 -.3220
130.000 -.3866
140.000 -.5837
150.000 -.7346
160.000 -.6669
170.000 -.5510
180.000 -.4776
190.000 -.5180
200.000 -.4385
210.000 -.3988
220.000 -.3610
230.000 -.3209
240.000 -.2552
250.000 -.1698
260.000 -.1126
270.000 -.0950
280.000 -.0602

X/L

PHI

90.000 -.3371 -.3577 -.3727
100.000 -.3677 -.3687 -.3056
110.000 -.3157 -.2627 -.2228
120.000 -.1352
130.000 -.2073
140.000 -.1123
150.000 -.0642
160.000 -.0550
170.000 -.0480
180.000 -.0676
190.000 -.0733
200.000 -.0492
210.000 -.0654
220.000 -.0636
230.000 -.0556
240.000 -.0671
250.000 -.0673
260.000 -.0716
270.000 -.0656
280.000 -.0195
290.000 .0366
300.000 .0358
310.000 .0188
320.000 .0149
330.000 .0147
340.000 .0456
350.000 -.0709
360.000 -.1608
370.000 -.2315
380.000 -.1393
390.000 -.0976
400.000 -.0428
410.000 -.0752
420.000 -.1737
430.000 -.0062
440.000 -.0514
450.000 .0082
460.000 .0641
470.000 .0419
480.000 .0356
490.000 .0161
500.000 -.0090

X/L

PHI

60.000
70.000
80.000
90.000
100.000
110.000
120.000
130.000
140.000
150.000
160.000
170.000
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440.000
450.000
460.000
470.000
480.000
490.000
500.000

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

$$\text{MACH} (7) = 1.151 \quad \text{ALPHA} (6) = 17.150$$

DEPENDENT VARIABLE CP

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2
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PMI

[illegible]

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FBI

Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422
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60,000	-4,179	-3,656	-3,797	-3,756	-4,015	.0000	-4,355	-4,110	-.0393
70,000	-3,941	-4,559	-2,679	-2,916	-3,355	-.3963	-4,073	-.1828	-.0137
80,000	-2,212	-2,366	-1,503	-1,585	-.1977	-.4449	-2,2402		
90,000							-.0820		
100,000							-.1446		
110,000							-.4104		
120,000							-.4677		
130,000							-.5419		
140,000	-2,088	-.0275	-.2410	-.3209	-.4596	-.4718			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(٩٤٥٥٥)

$$\text{MACH (8)} = 1.250 \quad \text{ALPHA (1)} = 6.521$$

SECTION (1) FUSELAGE

X/L	.1200	.1643	.2030	.2420	.2640	.2620	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI														
60.000	.0770	.1034												
70.000	.1012	.1307												
80.000	.1263	.1662												
90.000		.1924	-.0366	-.2533	-.2696	-.2613	.0000	-.2191	-.2492	-.2409	-.2315	-.2413	-.2166	-.2167
100.000					-.2694	-.3031	-.2803	-.2315	-.2333	-.2594	-.2615	-.2330	-.2452	-.1720
110.000					-.3371	-.3461	-.3427	-.3153	-.3227	-.3170	-.2694	-.1997	.0000	-.1546
120.000					-.3514								.0000	
130.000					-.4981								-.1470	
140.000					-.5462								-.1546	
150.000					-.4909								-.1659	
160.000					-.4471								-.1708	
170.000					-.4071								-.1708	
180.000					-.3971	-.3361	-.2906	-.2323	-.2020	-.1610	-.1210	-.0810	-.0410	-.0010

X/L	.4500	.4600	.4800	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.1873	-.1577	-.1663	-.1411	-.1319	-.1171	-.0880	-.0519	-.0113	.0310	.0316	-.0329	-.0814	.0000
100.000	-.1587	-.1628	-.1491	-.1351	-.1189	-.1157	-.1016	-.0652	-.0113	.0157	.0334	-.0166	-.0280	-.1078
110.000	-.1419	-.1323	-.1181	-.1173	-.1101	-.0982	-.0820	-.0572	-.0188	.0169	.0240	-.0047	-.0366	-.0723
120.000						-.0687							-.0142	
130.000						-.0685							-.0111	
140.000						-.0640							-.0008	
150.000						-.0446							-.0010	
160.000						-.0505							-.0027	
170.000						-.0499							-.0081	
180.000	-.1019	-.0876	-.0642	-.0642	-.0613	-.0608	-.0634	-.0648	-.0658	-.0650	-.0398	-.0267	-.0081	.0346
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					

[illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD008)

MACM (8) = 1.249 ALPHA (2) = 0.681

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI															
60.000	.0699	.0640	.0962												
70.000	.0632	.1023	.1439												
80.000	.0882	.1340	.1998												
90.000		.2104	-.0110	-.2399	-.2727	-.2402	.0000	-.2109	-.2455	-.2407	-.2519	-.2443	-.2177	-.2848	
100.000					-.2717	-.2853	-.2602	-.2411	-.2490	-.2572	-.2867	-.2822	-.3096	-.2345	
110.000					-.3334	-.3307	-.3270	-.2993	-.3160	-.3237	-.3250	-.2820	.0000	-.1941	
120.000					-.3441									.0000	
130.000					-.3019									-.1342	
140.000					-.3715									-.1552	
150.000					-.5165									-.1552	
160.000					-.4646									-.1554	
170.000					-.4198									-.1565	
180.000					-.4215	-.3379	-.3131	-.2962	-.2877	-.2553	-.2269	-.1865	-.1632	-.1132	

X/L	.4900	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.2361	-.2045	-.2063	-.1742	-.1697	-.1670	-.1345	-.0867	-.0387	-.0187	.0047	-.0476	-.1087	-.1234	.0000
100.000	-.2025	-.1986	-.1803	-.1615	-.1543	-.1547	-.1333	-.0938	-.0359	-.0290	.0057	-.0318	-.0865	-.0907	-.1254
110.000	-.1771	-.1593	-.1455	-.1419	-.1369	-.1302	-.1081	-.0784	-.0512	-.0159	-.0066	-.0199	-.0595	-.0720	-.0884
120.000					-.0984									-.0433	
130.000					-.0764									-.0441	
140.000					-.0692									-.0258	
150.000					-.0476									-.0244	
160.000					-.0500									-.0262	
170.000					-.0548									-.0349	
180.000	-.0843	-.0872	-.0700	-.0714	-.0655	-.0669	-.0718	-.0732	-.0744	-.0673	-.0591	-.0570	-.0288	-.0413	-.0020

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
60.000							-.0403		
70.000							-.1508	.0469	.0000
80.000							-.2119	-.0859	.1512
90.000	-.1917	-.1298	-.2122	-.1302	-.1361	.0000	-.2309	-.2421	.1249
100.000	-.1893	-.2207	-.1676	-.0485	-.0775	-.1669			
110.000	-.1183	-.1846	-.0071	.0206	-.0231	-.1819			
120.000						-.0632			
130.000						.0992			
140.000						.2964			
150.000						.3744			
160.000						.3915			
170.000						.4398			
180.000	-.1110	-.0410	.1718	.2523	.3285	.3015			

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A03

(RECORD)

AMES 80-830 PRESSURE VENTING - SHUTTLE ORBITER

MACH (8) = 1.250 ALPHA (3) = 10.750

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1200	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI														
60.000	.0844	.0730	.0690											
70.000	.0493	.0460	.1100											
80.000	.0826	.1015	.1871											
90.000	.2223	.0103	.2221	.2548	-.2106	-.2266	-.2421	-.2421	-.2421	-.2421	-.2421	-.2421	-.2421	-.2421
100.000				-.2555	-.2608	-.2376	-.2225	-.2321	-.2429	-.2802	-.2324	-.2324	-.2324	-.2324
110.000				-.3129	-.3036	-.2985	-.2812	-.3026	-.3166	-.3287	-.3397	-.3397	-.3397	-.3397
120.000				-.3332										
130.000				-.5019										
140.000				-.5921										
150.000				-.5371										
160.000				-.4764										
170.000				-.4241										
180.000				-.4392	-.3665	-.3248	-.3038	-.2881	-.2535	-.2161	-.1739	-.1506	-.1080	

X/L	.4900	.4480	.4080	.3050	.5240	.5480	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.2839	-.2819	-.2583	-.2083	-.1877	-.1736	-.1539	-.1376	-.1098	-.0791	-.0426	-.0811	-.1477	-.1729	.0000
100.000	-.2736	-.2483	-.2121	-.1863	-.1592	-.1335	-.1177	-.1237	-.1029	-.0880	-.0396	-.0365	-.1108	-.1275	-.1532
110.000	-.2170	-.1936	-.1606	-.1492	-.1149	-.1254	-.1186	-.1084	-.0918	-.0674	-.0473	-.0402	-.0757	-.0946	-.1177
120.000						-.0992								-.0503	
130.000						-.0934								-.0620	
140.000						-.0678								-.0249	
150.000						-.0428								-.0174	
160.000						-.0301								-.0251	
170.000						-.0464								-.0245	
180.000	-.0906	-.0859	-.0646	-.0728	-.0693	-.0702	-.0735	-.0737	-.0767	-.0781	-.0713	-.0579	-.0414	-.0222	

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
60.000							-.0782		
70.000							-.2033	-.0228	.0000
80.000							-.2533	-.1971	.1169
90.000	-.2321	-.1851	-.2587	-.1686	-.1640	.0000	-.2644	-.3224	.0822
100.000	-.2129	-.2474	-.1630	-.0849	-.1055	-.1967			
110.000	-.1390	-.1516	-.0441	-.0126	-.0342	-.0855			
120.000						.0478			
130.000						.3017			
140.000						.3956			
150.000						.4311			
160.000						.4816			
170.000	-.1374	-.0159	.1405	.2705	.5683	.3671			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (8) = 1.250 ALPHA (4) = 12.810

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3100	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.0515	.0558	.0529											
70.000	.0427	.0615	.0639											
80.000	.0362	.0680	.1069											
90.000	.2129	.0252	-.2127	-.2264	-.1913	.0000	-.15	-.1935	-.2023	-.2269	-.2236	-.1998	-.2875	
100.000				-.2109	-.2259	-.1990	-.185	-.1919	-.2135	-.2622	-.2691	-.3051	-.2965	
110.000				-.2967	-.2626	-.2543	-.245	.2697	-.2879	-.3070	-.3211	.0000	-.3150	
120.000				-.3327									.0000	
130.000				-.5035									-.1625	
140.000				-.6097									-.1451	
150.000				-.5565									-.1203	
160.000				-.4852									-.1125	
170.000				-.4291									-.1230	
180.000				-.4566	-.3829	-.3405	-.3183	-.2946	-.2522	-.2117	-.1856	-.1384	-.0908	
X/L	.4500	.4880	.4880	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.2848	-.2802	-.2913	-.2480	-.2099	-.2099	-.1939	-.1975	-.1872	-.1723	-.1112	-.1693	-.2086	.0000
100.000	-.2996	-.3017	-.2333	-.1966	-.1790	-.1829	-.1840	-.1702	-.1513	-.1610	-.1023	-.0855	-.1271	-.1940
110.000	-.2838	-.1968	-.1700	-.1644	-.1921	-.1554	-.1418	-.1275	-.1281	-.1071	-.0906	-.0684	-.0871	-.1465
120.000						-.1106							-.0704	
130.000						-.1341							-.1011	
140.000						-.0718							-.0553	
150.000						-.0284							-.0415	
160.000						-.0229							-.0359	
170.000						-.0177							-.0431	
180.000	-.0782	-.0698	-.0511	-.0462	-.0354	-.0360	-.0433	-.0498	-.0395	-.0683	-.0637	-.0609	-.0538	-.0566
X/L	.7290	.7470	.7670	.7830	.8010	.8290	.8620	.9000	.9400					
PHI														
60.000							-.0914							
70.000							-.2453	-.0488	.0070					
80.000							-.3024	-.2467	.0672					
90.000	-.2744	-.2214	-.3067	-.2525	-.2350	.0000	-.3140	-.3566	.0114					
100.000	-.2756	-.2657	-.2147	-.1528	-.1745	-.2541								
110.000	-.1699	-.1808	-.1053	-.0641	-.1038	-.2766								
120.000						-.1253								
130.000						.0034								
140.000						.2755								
150.000						.3993								
160.000						.4558								
170.000						.4860								
180.000	-.1824	-.1090	.0455	.2877	.3977	.4323								

MACH (0) = 1.250 ALPHA (3) = 14.900

AMES 00-030 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2810	.3200	.3590	.3980	.4370	.4760	.5150
PMI												
60.000	.0360	.0355	.0207									
70.000	.0192	.0443	.0322									
80.000	-.0011	.0406	.0633									
90.000		.1653	.0445	-.1994	-.2271	-.1966	.0000	-.1754	-.2215	-.2208	-.2378	-.2444
100.000					-.2287	-.2316	-.2143	-.1999	-.2145	-.2316	-.2506	-.2630
110.000					-.2798	-.2756	-.2754	-.2594	-.2828	-.3095	-.3297	-.3338
120.000					-.3207							.0000
130.000					-.5003							-.2288
140.000					-.6265							-.1820
150.000					-.5803							-.1441
160.000					-.5023							-.1275
170.000					-.4382							-.1368
180.000					-.4701	-.3911	-.3537	-.3290	-.3001	-.2559	-.2137	-.1694
												-.1505
												-.1114

X/L	.4900	.4680	.4060	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
90.000	-.2894	-.2983	-.2963	-.2844	-.2805	-.2429	-.2407	-.2373	-.2294	-.2196	-.2021	-.2358	-.2565	.0000
100.000	-.3086	-.3180	-.3043	-.2874	-.2204	-.2247	-.2184	-.2030	-.1734	-.2032	-.1624	-.1603	-.1819	-.2189
110.000	-.3485	-.2781	-.2195	-.1941	-.1901	-.1674	-.1706	-.1468	-.1472	-.1290	-.1119	-.1293	-.1216	-.1653
120.000						-.1329							-.0851	
130.000						-.2020							-.1242	
140.000						-.1136							-.0881	
150.000						-.0672							-.0567	
160.000						-.0531							-.0529	
170.000						-.0389							-.0494	
180.000	-.1026	-.0991	-.0615	-.0736	-.0615	-.0482	-.0793	-.0676	-.0758	-.0680	-.0642	-.0585	-.0575	-.0655
X/L	.7290	.7470	.7670	.7850	.8050	.8290	.8620	.9000	.9400					

PMI														
60.000														
70.000														
80.000														
90.000	-.3176	-.2085	-.3056	-.3495	-.3282	.0000								
100.000	-.3144	-.3466	-.3097	-.2369	-.2497	-.3165								
110.000	-.2527	-.2939	-.1690	-.1345	-.1690	-.3142								
120.000						-.1354								
130.000						-.0221								
140.000						-.1664								
150.000						.4133								
160.000						.4846								
170.000						.4954								
180.000	-.1903	-.1903	-.0619	.2610	.4119	.4893								

AMES 68-630 PRESSURE VENTING - SHUTTLE ORBITER

(KCC958)

$$\text{MACM}(\sigma) = 1.249 \quad \text{ALPHA}(\sigma) = 17.995$$

SECTION (1) FUSELAGE

Y/L	7070	1205	1047	2035	2420	2640	2820	3010	3190	3380	3570	3750	3940	4030	4310
P41															
60,000	.0283	.0207	.0114												
70,000	.0132	.0197	.0349												
80,000	.0249	.0079	.0854												
90,000			.1039	.0361	-.1693	-.1058	-.1621	.0000	-.1479	-.1843	-.1920	-.2073	-.2035	-.1926	-.2708
100,000				-.1975	-.1040	-.1040	-.1975	-.1826	-.1568	-.1877	-.1971	-.2437	-.2479	-.2912	-.2690
110,000					-.2416	-.2416	-.2596	-.2374	-.2254	-.2654	-.2769	-.2972	-.3137	.0000	-.3489
120,000					-.2982	-.2982								.0000	
130,000					-.4479	-.4479								-.2906	
140,000					-.6317	-.6317								-.1787	
150,000					-.5900	-.5900								-.1128	
160,000					-.5054	-.5054								-.0960	
170,000					-.4327	-.4327								-.0958	
180,000					-.4716	-.4716	-.3909	-.3443	-.3174	-.2803	-.2250	-.1801	-.1374	-.1028	-.0643

PMI	-0.0532	-0.2022	-0.3177	-0.3124	-0.3274	-0.3263	-0.2792	-0.2014	-0.2519	-0.2548	-0.2413	-0.2294	-0.2568	-0.2948	-0.0000
90,000	-0.3060	-0.3366	-0.3444	-0.3312	-0.2999	-0.2641	-0.2370	-0.2206	-0.1812	-0.2001	-0.1703	-0.1512	-0.1661	-0.2010	-0.2684
100,000	-0.3613	-0.3437	-0.3024	-0.2633	-0.2291	-0.2062	-0.1814	-0.1653	-0.1378	-0.1318	-0.1241	-0.0981	-0.0897	-0.1320	-0.1065
110,000						-0.1503							-0.0893		
120,000						-0.2618							-0.1544		
130,000						-0.1544							-0.1094		
140,000						-0.0848							-0.0866		
150,000						-0.0693							-0.0691		
160,000						-0.0619							-0.0693		
170,000	-0.0546	-0.0572	-0.0263	-0.0633	-0.0645	-0.0660	-0.0446	-0.0080	-0.0927	-0.1031	-0.1056	-0.0993	-0.0862	-0.0665	-0.0892

[illegible]

TABULATED SOURCE DATA - 1A29/0483

AMES 84-830 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (9) = 1.399 ALPHA (1) = 6.304

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0670 .1200 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PHI

80.000 .0782 .0742 .0341
 90.000 .0922 .0855 .0597
 100.000 .0943 .0933 .0878
 110.000 .1734 .0119 -.1796 -.2164 -.2069 .0000 -.1728 -.1978 -.1959 -.2044 -.1944 -.1957 -.2108
 120.000 .2143 -.2353 -.2245 -.2050 -.2044 -.2103 -.2276 -.2217 -.2360 -.1819
 130.000 .2844 -.2782 -.2770 -.2619 -.2628 -.2635 -.2477 -.2130 .0000 -.1546
 140.000 .2750
 150.000 -.3940
 160.000 -.4340
 170.000 -.3969
 180.000 -.3775
 190.000 -.3646
 200.000 -.3377 -.2895 -.2552 -.2312 -.2186 -.2083 -.1934 -.1851 -.1510

X/L

.4900 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.1753 -.1597 -.1569 -.1371 -.1339 -.1384 -.1237 -.1135 -.0953 -.0860 -.0366 -.0417 -.0758 .0000
 100.000 -.1553 -.1531 -.1414 -.1316 -.1224 -.1309 -.1273 -.1152 -.0832 -.0817 -.0343 -.0322 -.0544 -.1078
 110.000 -.1424 -.1248 -.1192 -.1182 -.1148 -.1158 -.1057 -.0955 -.0781 -.0659 -.0465 -.0278 -.0345 -.0811
 120.000 .0754
 130.000 -.0701
 140.000 -.0649
 150.000 -.0527
 160.000 -.0569
 170.000 -.0616
 180.000 -.1301 -.1129 -.1056 -.0856 -.0794 -.0729 -.0720 -.0704 -.0685 -.0639 -.0574 -.0611 -.0563 -.0337

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

80.000
 90.000
 100.000
 110.000
 120.000
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PAGE 34 MAR 74

(RECORDS)

AMES 68-030 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{ALPHA} (2) = 1.450 \quad \text{ALPHA} (2) = 0.618$$

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

PMI	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419
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[illegible]

PdI		-0.942				
61.000		-0.841				.0000
70.000		-1.969				.0551
83.000						
90.000						
100.000						
110.000						
120.000						
130.000						
140.000						
150.000						
160.000						
170.000						
180.000						

JAMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC008)

MACH (9) = 1.491 ALPHA (3) = 10.729

SECTION (1) FUSELAGE

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.2820	.0010	.3190	.3360	.3570	.3750	.3940	.4030	.4310
PHI															
60.000	.0663	.0566	.0216												
70.000	.0605	.0662	.0358												
80.000	.0599	.0705	.0620												
90.000			.0963	.0612	-.1542	-.1683	-.1669	.0000	-.1466	-.1805	-.1752	-.1865	-.1841	-.1926	-.2267
100.000						-.1683	-.2016	-.1653	-.1726	-.1840	-.1931	-.2188	-.2203	-.2470	-.2404
110.000						-.2397	-.2366	-.2378	-.2230	-.2440	-.2548	-.2612	-.2698	.0000	-.2676
120.000						-.2539								.0000	
130.000						-.3989								-.1588	
140.000						-.4696								-.1586	
150.000						-.4319								-.1592	
160.000						-.4014								-.1598	
170.000						-.3773								-.1731	
180.000						-.3692	-.3163	-.2785	-.2649	-.2571	-.2378	-.2197	-.1939	-.1777	-.1375
X/L	.4500	.4680	.4860	.5030	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.2201	-.2333	-.2463	-.2280	-.2057	-.1999	-.1877	-.1762	-.1655	-.1560	-.1218	-.1015	-.1210	-.1514	.0000
100.000	-.2484	-.2557	-.2246	-.1970	-.1774	-.1877	-.1776	-.1642	-.1393	-.1585	-.1130	-.0931	-.0917	-.1049	-.1718
110.000	-.2321	-.1969	-.1820	-.1699	-.1608	-.1597	-.1481	-.1326	-.1202	-.1171	-.1038	-.0864	-.0691	-.0754	-.1264
120.000						-.1193								-.0655	
130.000						-.1016								-.0825	
140.000						-.0806								-.0582	
150.000						-.0588								-.0599	
160.000						-.0580								-.0577	
170.000						-.0601								-.0659	
180.000	-.1197	-.1052	-.0858	-.0871	-.0812	-.0766	-.0785	-.0762	-.0775	-.0796	-.0701	-.0745	-.0741	-.0724	-.0722
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PHI															
60.000							-.1356								
70.000							-.2242	-.1474	.0000						
80.000							-.2353	-.2817	-.0010						
90.000	-.2082	-.0898	-.2477	-.2184	-.1789	.0000	-.2406	-.2876	-.1321						
100.000	-.2083	-.2131	-.2483	-.1218	-.1732	-.1732									
110.000	-.1536	-.1948	-.0944	-.0410	-.0602	-.1904									
120.000						-.0427									
130.000						.0698									
140.000						.2968									
150.000						.4092									
160.000						.4552									
170.000						.4691									
180.000	-.1363	-.1477	-.0341	.1990	.3285	.3798									

TABULATED SOURCE DATA - 1A29/OA63

DATE 24 MAR 74

(RECD06)

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

MACH (9) = 1.400 ALPHA (4) = 12.020

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0800	.1200	.1600	.2000	.2400	.2800	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
80.000	.0802	.0400	.0148											
75.000	.0431	.0331	.0275											
60.000	.0400	.0360	.0474											
90.000			.0828	.0749	-.1398	-.1743	-.1559	-.1375	-.1688	-.1655	-.1803	-.1788	-.1892	-.2281
100.000					-.1745	-.1875	-.1756	-.1625	-.1726	-.1794	-.2082	-.2133	-.2448	-.2422
110.000					-.2196	-.2226	-.2257	-.2158	-.2359	-.2435	-.2541	-.2637	-.0000	-.2869
120.000					-.2475								-.0000	
130.000					-.3359								-.1745	
140.000					-.4845								-.1662	
150.000					-.4492								-.1579	
160.000					-.4136								-.1566	
170.000					-.3796								-.1615	
180.000					-.3813	-.3269	-.2928	-.2759	-.2670	-.2420	-.2188	-.1886	-.1737	-.1351
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6880	.7100
PHI														
90.000	-.2192	-.2342	-.2531	-.2474	-.2538	-.2574	-.2507	-.2119	-.1961	-.1817	-.1583	-.1553	-.1631	-.1903
100.000	-.2528	-.2746	-.2738	-.2572	-.2535	-.2190	-.2070	-.1894	-.1589	-.1756	-.1327	-.1331	-.1308	-.1963
110.000	-.2923	-.2697	-.2354	-.2124	-.1875	-.1803	-.1697	-.1549	-.1322	-.1293	-.1151	-.1119	-.0994	-.1484
120.000						-.1375							-.0843	
130.000						-.1404							-.1178	
140.000						-.0964							-.0845	
150.000						-.0631							-.0702	
160.000						-.0604							-.0652	
170.000						-.0585							-.0706	
180.000	-.1182	-.1092	-.0840	-.0907	-.0841	-.0753	-.0792	-.0782	-.0836	-.0872	-.0862	-.0849	-.0845	-.0866
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000							-.1387							
70.000							-.2871	-.1853	.0000					
80.000							-.3196	-.3261	-.0702					
90.000	-.2494	-.0911	-.2983	-.2840	-.2452	.0000	-.2914	-.3223	-.2568					
100.000	-.2496	-.2460	-.3000	-.1794	-.1771	-.2247								
110.000	-.1916	-.2241	-.1381	-.0877	-.1037	-.2363								
120.000						-.0734								
130.000						.0453								
140.000						.2452								
150.000						.4186								
160.000						.4906								
170.000						.4919								
180.000	-.1379	-.1695	-.0723	.1834	.3573	.4577								

DATE 24 MAR 74

JAMES 00-030 PRESSURE VENTING - SHUTTLE ORBITER

(RECD00)

$$\text{MACM} (9) = 1.399 \quad \text{ALPHA} (5) = 14.980$$

INFORMATION / INFORMATION AGE

PK/L	.0875	.1280	.1640	.2035	.2425	.2640	.2825	.3010	.3195	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
80.000	.0371	.0393	.0073												
76.000	.0196	.0414	.0169												
84.000	.0124	.0327	.0308												
90.000		.0615	.0122	.0122	-.1280	-.1633	-.1504	.0000	-.1292	-.1625	-.1614	-.1768	-.1763	-.1853	-.2240
100.000						-.1621	-.1777	-.1643	-.1483	-.1578	-.1692	-.2042	-.2110	-.2435	-.2392
110.000						-.2099	-.2097	-.2124	-.1995	-.2202	-.2346	-.2469	-.2654	.0000	-.2899
120.000						-.2390								.0000	
130.000														-.2166	
140.000						-.5022								-.1863	
150.000						-.4689								-.1575	
160.000						-.4287								-.1546	
170.000						-.3847								-.1527	
180.000						-.3959	-.3392	-.3028	-.2844	-.2687	-.2427	-.2174	-.1844	-.1758	-.1320

[illegible]

PMI					
60.000				-1.793	
60.000				-3.265	-1.700
70.000					.0000
60.000				-4.082	-1.131
90.000				-3.577	-3.494
90.000					-2.855
100.000					.0000
100.000					-2.969
110.000					-2.297
120.000					-1.547
130.000					.0190
140.000					.1503
150.000					.4194
160.000					.5359
170.000					.5217
180.000					.5107
190.000					.3509
200.000					.0624
210.000					-.0944
220.000					-.1893
230.000					-.2743
240.000					-.3072
250.000					-.3072
260.000					-.2336
270.000					-.3627
280.000					-.3610
290.000					-.2465
300.000					-.7466
310.000					-.1334
320.000					-.1532
330.000					-.1047
340.000					.0190
350.000					.1503
360.000					.4194
370.000					.5359
380.000					.5217
390.000					.5107
400.000					.3509
410.000					.0624
420.000					-.0944
430.000					-.1893
440.000					-.2743
450.000					-.3072
460.000					-.3072
470.000					-.2336
480.000					-.3627
490.000					-.3610
500.000					-.2465
510.000					-.7466
520.000					-.1334
530.000					-.1532
540.000					-.1047
550.000					.0190
560.000					.1503
570.000					.4194
580.000					.5359
590.000					.5217
600.000					.5107
610.000					.3509
620.000					.0624
630.000					-.0944
640.000					-.1893
650.000					-.2743
660.000					-.3072
670.000					-.3072
680.000					-.2336
690.000					-.3627
700.000					-.3610
710.000					-.2465
720.000					-.7466
730.000					-.1334
740.000					-.1532
750.000					-.1047
760.000					.0190
770.000					.1503
780.000					.4194
790.000					.5359
800.000					.5217
810.000					.5107
820.000					

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (10) = 1.499 ALPHA (1) = 6.331

SECTION (1) FUSELAGE

PMI	.0670	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI															
60,000	.0603	.0620	.0366												
70,000	.1064	.0922	.0489												
80,000	.1113	.1033	.0642												
90,000			.1059	.0321	-.1375	-.1697	-.1607	.0000	-.1396	-.1586	-.1545	-.1596	-.1536	-.1612	-.1776
100,000						-.1707	-.1660	-.1641	-.1676	-.1704	-.1733	-.1662	-.1768	-.1850	-.1522
110,000						-.2411	-.2253	-.2261	-.2195	-.2262	-.2229	-.2030	-.1768	.0000	-.1180
120,000						-.2331								.0000	
130,000						-.3368								-.1193	
140,000						-.3727								-.1293	
150,000						-.3442								-.1466	
160,000						-.3293								-.1609	
170,000						-.3218								-.1657	
180,000						-.2950	-.2432	-.2106	-.1940	-.1897	-.1756	-.1735	-.1644	-.1592	-.1347

AMES 66-63D PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (10) = 1.500 ALPHA (2) = 0.502

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .0663 .0766 .0302
 70.000 .0920 .0842 .0427
 80.000 .0914 .0913 .0579
 90.000 .0947 .0553 .1204 .1523 .1424 .0000 .1246 .1356 .11430 .1521 .1492 .1589 .1663
 100.000 .1521 .1693 .1627 .1519 .1372 .1646 .1804 .1789 .2022 .1913
 110.000 .2135 .2102 .2138 .2016 .2093 .2111 .2113 .2105 .0000 .1667
 120.000 .2135
 130.000 .1382
 140.000 .1388
 150.000 .1353
 160.000 .1371
 170.000 .1329
 180.000 .1302 .2588 .2270 .2093 .2037 .1903 .1824 .1674 .1578 .1272

X/L

PHI

90.000 .1732 .1735 .1716 .1416 .1315 .1411 .1293 .1306 .1214 .1104 .0611 .0467 .0683 .0000
 100.000 .1804 .1694 .1441 .1237 .1154 .1250 .1274 .1227 .1030 .1146 .0626 .0468 .0487 .1110
 110.000 .1481 .1287 .1160 .1159 .1081 .1105 .1065 .1004 .0919 .0838 .0702 .0487 .0281 .0845
 120.000 .0766
 130.000 .0577
 140.000 .0547
 150.000 .0387
 160.000 .0416
 170.000 .0429
 180.000 .1048 .0955 .0679 .0678 .0568 .0549 .0521 .0528 .0545 .0570 .0517 .0521 .0487 .0452

X/L

PHI

60.000
 70.000
 80.000
 90.000 .1497 .0566 .1872 .1528 .1022 .0000
 100.000 .1519 .1633 .1898 .0589 .0523 .0971
 110.000 .1084 .1420 .0499 .0177 .0030 .1083
 120.000 .0147
 130.000 .1697
 140.000 .2977
 150.000 .3876
 160.000 .4308
 170.000 .3939
 180.000 .0998 .0987 .0610 .1851 .2470 .2670

DATE 24 MAR 74 *ABULATED SOURCE DATA - 1A29/0A63

(REC008)

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

MACH (10) = 1.900 ALPHA (3) = 10.590

SECTION 111 FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1200 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4090 .4310

PMI

60.000 .0601 .0875 .0322
70.000 .0725 .0734 .0417
80.000 .0744 .0807 .0366
90.000 .0850 .0816 .0063
100.000 .1413 .1577 .1516 .1398 .1450 .1514 .1730 .1743 .2017 .2000
110.000 .1923 .1884 .1970 .1860 .2016 .2119 .2143 .2185 .2270
120.000 .1187
130.000 .3347
140.000 .3977
150.000 .3673
160.000 .3461
170.000 .3323
180.000 .3176 .2690 .2372 .2219 .2162 .2011 .1880 .1670 .1572 .1228
X/L .4900 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5950 .6170 .6360 .6540 .6730 .6880 .7130

PMI

90.000 .1781 .1894 .2017 .1891 .1811 .1768 .1644 .1602 .1462 .1337 .1091 .1109 .1267 .0000
100.000 .2059 .2161 .1954 .1961 .1531 .1617 .1575 .1474 .1196 .1308 .0895 .0823 .0887 .1408
110.000 .2037 .1737 .1535 .1435 .1380 .1285 .1327 .1134 .1032 .0961 .0868 .0767 .0643 .1048
120.000 .1004
130.000 .0769
140.000 .0619
150.000 .0408
160.000 .0433
170.000 .0455
180.000 .11017 .0937 .0855 .0679 .0629 .0596 .0636 .0628 .0654 .0628 .0573 .0564 .0577 .0541
X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9070 .9400

PMI

60.000 .1233
70.000 .1969 .1426 .0000
80.000 .2053 .2500 .0308
90.000 .1785 .1270 .2125 .1940 .1525 .0720 .1995 .2401 .2220
100.000 .1819 .1981 .2239 .1029 .0943 .1457
110.000 .1425 .1701 .1586 .0198 .0310 .1583
120.000 .1076
130.000 .1070
140.000 .2947
150.000 .4119
160.000 .4634
170.000 .4625
180.000 .1268 .1225 .0504 .1643 .3015 .3613

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0A63

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (10) = 1.500 ALPHA (9) = 14.770

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.0726	.0543	.0308											
70.000	.0429	.0328	.0356											
80.000	.0323	.0474	.0487											
90.000		.0722	.0241	-.0924	-.1237	-.1116	.0000	-.0902	-.1240	-.1227	-.1389	-.1395	-.1543	-.1801
100.000					-.1230	-.1372	-.1229	-.1084	-.1194	-.1315	-.1624	-.1706	-.1966	-.1958
110.000					-.1628	-.1659	-.1698	-.1564	-.1752	-.1903	-.2052	-.2195	.0000	-.2424
120.000					-.1829								.0000	
130.000					-.3273								-.1758	
140.000					-.4273								-.1591	
150.000					-.3971								-.1365	
160.000					-.3666								-.1375	
170.000					-.3405								-.1373	
180.000					-.3405	-.2930	-.2973	-.2409	-.2273	-.2067	-.1865	-.1638	-.1493	-.1108
X/L	.4300	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.1721	-.1872	-.2066	-.2055	-.2126	-.2279	-.2226	-.2221	-.2131	-.2001	-.1842	-.1861	-.1867	.0000
100.000	-.2034	-.2229	-.2309	-.2292	-.2298	-.2362	-.2255	-.1984	-.1614	-.1794	-.1478	-.1538	-.1414	-.1869
110.000	-.2308	-.2524	-.2490	-.2433	-.2216	-.1968	-.1753	-.1544	-.1334	-.1308	-.1271	-.1228	-.1023	-.1372
120.000					-.1422								-.0817	
130.000					-.1785								-.1311	
140.000					-.1041								-.1053	
150.000					-.0607								-.0811	
160.000					-.0528								-.0685	
170.000					-.0505								-.0758	
180.000	-.1037	-.0991	-.0660	-.0797	-.0719	-.1671	-.1687	-.0723	-.0764	-.0866	-.0847	-.0877	-.0864	-.0971
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000														
70.000														
80.000														
90.000	-.2631	-.0924	-.3109	-.3158	-.2821	.0000	-.3557	-.1731	.0000					
100.000	-.2653	-.2313	-.3094	-.2026	-.2007	-.2502	-.3559	-.3593	-.1236					
110.000	-.2015	-.2306	-.1531	-.0969	-.1096	-.2442	-.3043	-.3210	-.2752					
120.000						-.0539								
130.000						.0630								
140.000						.1509								
150.000						.4029								
160.000						.5353								
170.000						.5212								
180.000	-.1327	-.1693	-.0793	-.0377	.3226	.5205								

JAMES 66-037 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

$$\text{MACH} (17) = 1.497 \quad \text{ALPHA} (3) = 16.925$$

SECTION 1105 USELAGE

DEPENDENT VARIABLE CP

Z/L	.0875	.1260	.1640	.2030	.2420	.2840	.3220	.3610	.3990	.3380	.3570	.3750	.3940	.4030	.4310
PHI															
90.000	.7694	.0576	.0140												
70.000	.0265	.0539	.0196												
80.000	.0037	.0336	.0254												
90.000			.0461	.0131	-.1026	-.1184	-.1084	.0000	-.0991	-.1345	-.1325	-.1446	-.1355	-.1577	-.1844
100.000						-.1182	-.1293	-.1187	-.1099	-.1243	-.1377	-.1662	-.1640	-.1922	-.1942
110.000						-.1506	-.1556	-.1613	-.1522	-.1777	-.1969	-.2031	-.2081	.0000	-.2398
120.000						-.1684								.0000	
130.000						-.3236								-.2554	
140.000						-.4368								-.1983	
150.000						-.4133								-.1542	
160.000						-.3770								-.1416	
170.000						-.3435								-.1433	
180.000						-.3506	-.3018	-.2671	-.2506	-.2414	-.2183	-.1983	-.1670	-.1596	-.1248
Z/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1785	-.1849	-.2006	-.2005	-.2068	-.2299	-.2373	-.2456	-.2527	-.2471	-.2348	-.2396	-.2517	-.2667	.0000
100.000	-.2055	-.2210	-.2279	-.2249	-.2212	-.2381	-.2499	-.2403	-.2076	-.2086	-.1669	-.1737	-.1773	-.1763	-.2210
110.000	-.2540	-.2549	-.2618	-.2573	-.2516	-.2371	-.2131	-.1875	-.1618	-.1514	-.1263	-.1318	-.1246	-.1239	-.1636
120.000						-.1597								-.1053	
130.000						-.2328								-.1327	
140.000						-.1362								-.1378	
150.000						-.0784								-.0991	
160.000						-.0645								-.0888	
170.000						-.0596								-.0995	
180.000	-.1058	-.1003	-.0865	-.0869	-.0812	-.0799	-.0909	-.0956	-.1041	-.1094	-.1092	-.1124	-.1107	-.1119	-.1083
Z/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PHI															
90.000							-.2654								
70.000							-.4391	-.2641	.0000						
80.000							-.4293	-.4275	-.1946						
90.000	-.3271	-.1743	-.3697	-.3794	-.3413	.0000	-.3789	-.3914	-.3183						
100.000	-.3280	-.3055	-.3693	-.2617	-.2490	-.3052									
110.000	-.2518	-.2756	-.2044	-.1427	-.1434	-.2699									
120.000						-.1079									
130.000						.0266									
140.000						-.0215									
150.000						.4462									
160.000						.5773									
170.000						.5463									
180.000	-.1777	-.2109	-.1171	-.1113	.3066	.5936									

JAMES 00-030 PRESSURE VENTING - SHUTTLE ORBITER

(REC09) (16 OCT 73)

REFERENCE DATA

300P	=	.0000	50. IN.	1000P	=	.0000	IN.
400P	=	.0000	IN.	1400P	=	.0000	IN.
500P	=	.0000	IN.	2000P	=	.0000	IN.
SCALE	=	.0150	SCALE				

BETA	=	-4.000	ELEVTR	=	-13.000
AILRON	=	.000	FUDDER	=	.000
RN/L	=	2.250			

PARAMETRIC DATA

MACH (1) = 1.750 ALPHA (1) = 0.503

SECTION (1) FUSELAGE

[illegible]

TABULATED SOURCE DATA - 1A29/OA63

DATE 26 MAR 74

(RECD09)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (1) = 1.736 ALPHA (1) = 6.303

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI
130.000 .3334
140.000 .1010
150.000 .1476
160.000 .1791
170.000 .1330
180.000 .2619

MACH (1) = 1.730 ALPHA (2) = 8.396

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0670 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3360 .3570 .3750 .3940 .4030 .4310

PHI
60.000 .2453 .2142 .1511
70.000 .2220 .2145 .1569
80.000 .2021 .2091 .1667
90.000 .1681 .1236 -.0761
100.000 -.0392 -.0332 .0000
110.000 -.0389 -.0341 -.0302
120.000 -.0450 -.0501 -.0616
130.000 -.0408
140.000 -.1594
150.000 -.2771
160.000 -.2743
170.000 -.2539
180.000 -.2522
190.000 -.2625
200.000 -.2301
210.000 -.1838
220.000 -.1667
230.000 -.1460
240.000 -.1368
250.000 -.1330
260.000 -.1973
270.000 -.1769
280.000 -.1471
290.000 -.1463
300.000 -.1329
310.000 -.1130
320.000 -.0841
330.000 -.0724
340.000 -.0573
350.000 -.0537
360.000 -.0400
370.000 -.0358
380.000 -.0251
390.000 -.0226
400.000 -.0243
410.000 -.0537
420.000 -.0573
430.000 -.0537
440.000 -.0537
450.000 -.0537
460.000 -.0537
470.000 -.0537
480.000 -.0537
490.000 -.0537
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940.000 -.0537
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980.000 -.0537
990.000 -.0537
1000.000 -.0537

X/L .4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI
90.000 -.0512
100.000 -.0774
110.000 -.1126
120.000 -.1187
130.000 -.1196
140.000 -.1226
150.000 -.1226
160.000 -.1226
170.000 -.1226
180.000 -.1226
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410.000 -.1226
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940.000 -.1226
950.000 -.1226
960.000 -.1226
970.000 -.1226
980.000 -.1226
990.000 -.1226
1000.000 -.1226

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OA63

(REC'D)

AMES 64-832 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACM} (1) = 1.732 \quad \text{ALPHA} (2) = 0.390$$

SECTION 11 FUSELAGE

	7297	.7473	.7637	.7803	.8030	.8290	.8620	.9000	.9400
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	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2
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[illegible][illegible]

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2
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10.000	-.1220	-.1327	-.1445	-.0382	.0371	.0461
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20.000
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30.0000 0002.

40.000 .0014

\$0.000 .0957

00.000 .1065

70.036 .1290

$$\text{MACH} (1) = 1.750 \quad \text{ALPHA} (3) = 10.460$$

SECTION (11)	DEPENDENT VARIABLE OF
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99	99
100	100

	.0870	.1260	.1640	.2030	.2420	.2810	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
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III

	2017	2018	2019	2020
Revenue	\$1,476,000	\$1,476,000	\$1,476,000	\$1,476,000
Expenses	(1,476,000)	(1,476,000)	(1,476,000)	(1,476,000)
Net Income	\$0	\$0	\$0	\$0

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

10,000	1,125	1,250	1,325
20,000	1,215	1,339	1,450

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(b)(6), (b)(7)(C)

AMES 66-630 PRESSU VENTING - SHUTTLE ORBITER (REC009)

$$\text{MACH (1)} = 1.750 \quad \text{ALPHA (4)} = 12.560$$

SECTION / 11 FUSELAGE

DEPENDENT VARIABLE CP

[illegible]

	.7670	.8290	.9000	.9400
	.7830	.8030	.8620	

PFI					
\$.000	-	-.2495			.0000
75.000	-	-.2208	-	-.2026	.0000
60.000	-	-.1652	-	-.1759	-.1840
50.000	-	-.1219	-	-.1629	-.1893
40.000	-	-.0803	-	-.2043	.0000

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2
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$$\text{MACH (1)} = 1.750 \quad \text{ALPHA (5)} = 14.650$$

SECTION (1) USE PAGE

DEPENDENT VARIABLE OF

[illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC009)

MACH (1) = 1.750 ALPHA (5) = 14.650

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2820 .3010 .3190 .3360 .3570 .3750 .3940 .4050 .4310

PHI

100.000
170.000
180.000

-.2872
-.2771
-.2810

-.2444 -.2209 -.2010 -.1893 -.1781 -.1736 -.1635 -.1580 -.1329

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000
100.000
110.000
120.000
130.000
140.000
150.000
160.000
170.000
180.000

-.0351 -.0408 -.0469 -.0534 -.0587 -.0726 -.0749 -.0775 -.0797 -.0812 -.0855 -.0858 -.0968 .0000
-.0613 -.0692 -.0745 -.0756 -.0806 -.0937 -.0987 -.1041 -.0967 -.1120 -.0884 -.0886 -.0886 -.1285
-.1085 -.1110 -.1137 -.1168 -.1199 -.1302 -.1343 -.1383 -.1377 -.1405 -.1400 -.1344 -.1197 -.1259 -.1513
-.2982
-.3133
-.3235
-.1903
-.1270
-.1032
-.0928

-.1157 -.1034 -.0881 -.0801 -.0845 -.0826 -.0868 -.0837 -.0848 -.0768 -.0788 -.0765 -.0785 -.0844

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000
70.000
80.000
90.000
100.000
110.000
120.000
130.000
140.000
150.000
160.000
170.000
180.000

-.2827
-.2684 -.2568 .0000
-.2098 -.2131 -.2223
-.1474 -.1802 -.2077
-.0953 -.0894 -.1102 -.2152 -.2199 .0000
-.1322 -.1333 -.1724 -.1972 -.1848 -.1131
-.1347 -.1581 -.1876 -.1333 -.0497 -.0351
.1169
.0520
-.0373
-.0421
.1664
.0943

-.1513 -.1693 -.0841 -.0832 .1932 .5050

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (1) = 1.750 ALPHA (6) = 16.640

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4090 .4310

PHI

60.000 .2013 .1644 .1418
 70.000 .1297 .1583 .1322
 80.000 .0792 .1089 .1193
 90.000 .0974 .0722 -.0282 -.0476 -.0310 .0000 -.0181 -.0193 -.0176 -.0173 -.0180 -.0879 -.0334
 100.000 .0448 -.0301 -.0216 -.0187 -.0215 -.0251 -.0299 -.0356 -.0431 -.0509
 110.000 .0344 -.0335 -.0357 -.0355 -.0503 -.0634 -.0721 -.0813 .0000
 120.000 .0481
 130.000 -.1592
 140.000 -.3072
 150.000 -.3178
 160.000 -.3044
 170.000 -.2895
 180.000 -.2923 -.2276 -.2083 -.1932 -.1809 -.1736 -.1597 -.1485 -.1259

X/L

PHI

90.000 -.0343 -.0433 -.0520 -.0550 -.0592 -.0728 -.0718 -.0761 -.0800 -.0800 -.0653 -.0643 -.0714 -.0937 .0000
 100.000 -.0590 -.0689 -.0748 -.0779 -.0790 -.0915 -.0933 -.0984 -.0936 -.1089 -.0830 -.0796 -.0739 -.0816 -.1200
 110.000 -.1051 -.1071 -.1124 -.1160 -.1188 -.1316 -.1324 -.1347 -.1355 -.1375 -.1324 -.1262 -.1087 -.1146 -.1456
 120.000 .2944
 130.000 -.3078
 140.000 -.3384
 150.000 -.3064
 160.000 -.1528
 170.000 -.1148
 180.000 -.1149 -.1054 -.0868 -.0898 -.0870 -.0877 -.0902 -.0945 -.0948 -.0973 -.0920 -.0960 -.0977 -.1028 -.1102

X/L

PHI

60.000
 70.000
 80.000
 90.000
 100.000
 110.000
 120.000
 130.000
 140.000
 150.000
 160.000
 170.000
 180.000

.2959
 -.3155
 -.2585
 -.1791
 .0000
 -.1375
 -.0412
 .1016
 .0266
 -.0569
 -.0235
 .1441
 .0157
 .5265

-.3074
 -.2571
 -.2071
 .0000
 -.2588
 -.2248
 .9400
 .9000
 .8620
 .8290
 .8030
 .7850
 .7670
 .7470
 .7290
 .7090
 .6880
 .6730
 .6540
 .6360
 .6170
 .5980
 .5800
 .5610
 .5460
 .5240
 .5050
 .4860
 .4680
 .4500

AMES 68-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC009)

MACH (2) = 2.076 ALPHA (1) = 6.709

SECTION 1: FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2640 .3010 .3190 .3360 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .2564 .2746 .1499

70.000 .2502 .2546 .1595

80.000 .2201 .2038 .1694

90.000 .1889 .1226 .0056

100.000 .0258 .0188 .0000

110.000 .0258 .0206 .0255

120.000 .0270 .0270 .0444

130.000 .0006 .0006 .0656

140.000 .0967 .0967 .1549

150.000 .1932 .1932 .1468

160.000 .1955 .1955 .1330

170.000 .1827 .1827 .1379

180.000 .1165 .1165 .1246

190.000 .1187 .1187 .1253

200.000 .5460 .5460 .1254

X/L .4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6820 .7100

PHI

90.000 .0297 .0329 .0381

100.000 .0491 .0572 .0566

110.000 .0789 .0786 .0771

120.000 .0817 .0817 .0806

130.000 .1210 .1210 .1210

140.000 .1063 .1063 .1063

150.000 .0967 .0967 .0967

160.000 .0978 .0978 .0978

170.000 .0846 .0846 .0846

180.000 .0794 .0794 .0794

190.000 .0826 .0826 .0826

200.000 .0913 .0913 .0913

X/L .7290 .7470 .7670 .7850 .8030 .8250 .8620 .9000 .9400

PHI

60.000 .1183 .1183 .1183

70.000 .0993 .0993 .0993

80.000 .0713 .0713 .0713

90.000 .0535 .0535 .0535

100.000 .0319 .0319 .0319

110.000 .0194 .0194 .0194

120.000 .0094 .0094 .0094

130.000 .0016 .0016 .0016

140.000 .0016 .0016 .0016

150.000 .0016 .0016 .0016

160.000 .0016 .0016 .0016

170.000 .0016 .0016 .0016

180.000 .0016 .0016 .0016

190.000 .0016 .0016 .0016

200.000 .0016 .0016 .0016

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0A63

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (2) = 2.006 ALPHA (2) = 0.020

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
80.000	.2316	.1966	.1480												
70.000	.2123	.1963	.1509												
60.000	.1922	.1682	.1565												
90.000		.1716	.1126	-.0014	-.0281	-.0261	-.0000	-.0145	-.0124	-.0124	-.0127	-.0156	-.0719	-.0274	
100.000					-.0299	-.0211	-.0177	-.0156	-.0182	-.0217	-.0307	-.0326	-.0427	-.0445	
110.000					-.0162	-.0223	-.0319	-.0366	-.0519	-.0606	-.0641	-.0679	.0000	-.0746	
120.000						-.0034							.0000		
130.000						-.1021							-.1856		
140.000						-.2003							-.1731		
150.000						-.2081							-.1554		
160.000						-.1962							-.1551		
170.000						-.1968							-.1343		
180.000						-.1997	-.1864	-.1719	-.1579	-.1463	-.1385	-.1317	-.1300	-.1225	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.0260	-.0266	-.0323	-.0323	-.0364	-.0436	-.0462	-.0512	-.0541	-.0567	-.0483	-.0456	-.0468	-.0588	.0000
100.000	-.0479	-.0543	-.0554	-.0531	-.0531	-.0566	-.0626	-.0679	-.0658	-.0793	-.0679	-.0673	-.0612	-.0591	-.0803
110.000	-.0806	-.0820	-.0846	-.0869	-.0846	-.0910	-.0922	-.0946	-.0951	-.0984	-.1004	-.0996	-.0905	-.0872	-.1010
120.000						-.2077								-.1802	
130.000						-.1626								-.1902	
140.000						-.1289								-.1086	
150.000						-.1092								-.0840	
160.000						-.0963								-.0782	
170.000						-.0840								-.0673	
180.000	-.1173	-.1115	-.0967	-.0904	-.0832	-.0779	-.0738	-.0711	-.0664	-.0641	-.0603	-.0588	-.0588	-.0600	-.0556

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
80.000									
70.000									
60.000									
90.000	-.0760	-.0681	-.1203	-.1345	-.1410	.0000			
100.000	-.0905	-.1060	-.1214	-.1293	-.1278	-.0323			
110.000	-.0865	-.1069	-.1369	-.0914	-.0063	.0424			
120.000						.2270			
130.000						.2076			
140.000						.0407			
150.000						.0245			
160.000						.1394			
170.000						.1026			
180.000	-.0978	-.1203	-.0497	.0465	.1400	.2816			

JAMES 00-030 PRESSURE VENTING - SHUTTLE ORBITER

(60034)

MACH (2) = 2.076 ALPHA (3) = 10.890

SECTION (1) FUSELAGE

[illegible]

TABULATED SOURCE DATA - 1A29/0A63

(RECORDS)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (2) = 2.006 ALPHA (4) = 12.910

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
60.000	.2205	.1926	.1475												
70.000	.1754	.1780	.1414												
80.000	.1386	.1324	.1350												
90.000		.1333	.0856	.0165	-.0414	-.0322	.0000	-.0217	-.0197	-.0179	-.0188	-.0170	-.0788	-.0233	
100.000				-.0400	-.0298	-.0255	-.0229	-.0229	-.0246	-.0269	-.0288	-.0340	-.0381		
110.000				-.0240	-.0252	-.0307	-.0339	-.0434	-.0490	-.0574	-.0644	.0000	-.0730		
120.000				-.0147											
130.000				-.1149											
140.000				-.2195											
150.000				-.2305											
160.000				-.2215											
170.000				-.2148											
180.000				-.2195	-.2068	-.1897	-.1749	-.1621	-.1517	-.1470	-.1426	-.1369	-.1279		

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	-.0225	-.0259	-.0305	-.0329	-.0346	-.0421	-.0462	-.0503	-.0523	-.0588	-.0603	-.0456	-.0462	-.0538	.0000
100.000	-.0421	-.0470	-.0493	-.0508	-.0510	-.0571	-.0617	-.0688	-.0673	-.0796	-.0795	-.0681	-.0623	-.0561	-.0809
110.000	-.0776	-.0785	-.0799	-.0819	-.0825	-.0886	-.0902	-.0954	-.0937	-.1028	-.1050	-.1053	-.0948	-.0913	-.0987
120.000						-.2447								-.1329	
130.000						-.2531								-.2052	
140.000						-.2232								-.2278	
150.000						-.1585								-.1932	
160.000						-.1107								-.1141	
170.000						-.0972								-.0916	
180.000	-.1171	-.1082	-.0958	-.0935	-.0837	-.0860	-.0858	-.0834	-.0811	-.0814	-.0772	-.0752	-.0778	-.0807	-.0818

X/L	.7290	.7470	.7670	.7850	.8030	.8230	.8620	.9000	.9400
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PMI									
60.000							-.2003		
70.000							-.1805	-.1668	.0000
80.000							-.1292	-.1342	-.1522
90.000	-.0982	-.0800	-.1229	-.1482	-.1552	.0000	-.0850	-.1109	-.1450
100.000	-.0952	-.1118	-.1290	-.1412	-.1447	-.0666			
110.000	-.0946	-.1115	-.1392	-.1208	-.0375	.0227			
120.000						.1463			
130.000						.0621			
140.000						-.0494			
150.000						-.1001			
160.000						.0999			
170.000						.0656			
180.000	-.1034	-.1261	-.10766	-.0777	.1071	.4073			

JAMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

(REC'D)

MACH (2) = 2.000 ALPHA (5) = 14.980

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP													
X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI															
90.000	.2136	.1696	.1445												
70.000	.1526	.1669	.1366												
60.000	.1122	.1332	.1247												
90.000		.1108	.0684	-.0252	-.0472	-.0394	.0090	-.0295	-.0272	-.0263	-.0246	-.0210	-.0817	-.0280	
100.000					-.0490	-.0368	-.0316	-.0298	-.0292	-.0298	-.0290	-.0306	-.0334	-.0355	
110.000					-.0304	-.0310	-.0348	-.0388	-.0452	-.0524	-.0563	-.0609	-.0690	-.0693	
120.000					-.0275										
130.000					-.1160										
140.000					-.2295										
150.000					-.2399										
160.000					-.2321										
170.000					-.2234										
180.000					-.2260	-.2140	-.1975	-.1807	-.1676	-.1575	-.1513	-.1441	-.1412	-.1296	
X/L	.4500	.4680	.4860	.5030	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	-.0262	-.0262	-.0320	-.0340	-.0331	-.0433	-.0485	-.0529	-.0558	-.0590	-.0538	-.0505	-.0488	-.0529	.0000
100.000	-.0395	-.0447	-.0475	-.0470	-.0461	-.0588	-.0634	-.0678	-.0690	-.0769	-.0693	-.0672	-.0608	-.0561	-.0759
110.000	-.0739	-.0755	-.0782	-.0785	-.0819	-.0880	-.0921	-.0965	-.0995	-.1030	-.1047	-.1024	-.0927	-.0895	-.0969
120.000						-.2436									
130.000						-.2477									
140.000						-.2612									
150.000						-.2196									
160.000						-.1405									
170.000						-.1012									
180.000	-.1166	-.1102	-.0970	-.0964	-.0918	-.0907	-.0889	-.0880	-.0886	-.0898	-.0877	-.0907	-.0933	-.1182	-.0983
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PMI															
60.000							-.2227								
70.000							-.2149	-.2102	.0000						
80.000							-.1761	-.1621	-.1764						
90.000	-.1016	-.0906	-.1388	-.1514	-.1493	.0000	-.1222	-.1263	-.1496						
100.000	-.1042	-.1187	-.1391	-.1184	-.1217	-.1149									
110.000	-.0945	-.1147	-.1228	-.0972	-.0785	.0349									
120.000						.1428									
130.000						.0465									
140.000						-.0701									
150.000						-.0704									
160.000						-.0587									
170.000						-.0381									
180.000	-.1016	-.1249	-.0998	-.1016	.0497	.4036									

TABULATED SOURCE DATA - 1A29/OA63

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

(REC'D)

MACH (2) = 2.528 ALPHA (6) = 17.040

DEPENDENT VARIABLE CP

FUSELAGE

	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PW															
PMI															
60.000	.2015	.1665	.1426												
70.000	.1341	.1169	.1030												
80.000	.0868	.1129	.1155												
90.000			.0859	.0492	-.0336	-.0542	-.0487	.0000	-.0368	-.0353	-.0339	-.0313	-.0271	-.0046	-.0320
100.000					-.0536	-.0536	-.0475	-.0426	-.0379	-.0368	-.0351	-.0336	-.0291	-.0346	-.0366
110.000						-.0409	-.0434	-.0455	-.0466	-.0507	-.0542	-.0554	-.0577	.0000	-.0664
120.000						-.0409								.0000	
130.000						-.1272								-.2515	
140.000						-.2361								-.2437	
150.000						-.2491								-.2342	
160.000						-.2419								-.1938	
170.000						-.2308								-.1655	
180.000						-.2329	-.2196	-.2004	-.1833	-.1714	-.1593	-.1519	-.1444	-.1415	-.1302

K/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
FMI														
90.000	-.0303	-.0297	-.0340	-.0355	-.0372	-.0502	-.0497	-.0544	-.0591	-.0620	-.0543	-.0573	-.0646	.0000
100.000	-.0392	-.0433	-.0470	-.0464	-.0502	-.0505	-.0644	-.0685	-.0696	-.0737	-.0675	-.0652	-.0599	-.0800
110.000	-.0719	-.0716	-.0741	-.0765	-.0799	-.0889	-.0937	-.0957	-.0978	-.1013	-.0971	-.0986	-.0866	-.0564
120.000						-.2439							-.1873	
130.000						-.1249							-.1940	
140.000						-.2602							-.2192	
150.000						-.2660							-.2227	
160.000						-.2065							-.2189	
170.000						-.1230							-.1574	
180.000	-.11200	-.11106	-.09996	-.09684	-.09661	-.09566	-.09354	-.09669	-.10113	-.10557	-.10662	-.11120	-.11161	-.1229
L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					

[illegible]

JAMES 66-635 PRESSURE VENTING - SHUTTLE ORBITER

(RECEIVED) (16 OCT 73)

REFERENCE DATA

SEEF =	0.000 SQ. IN.	XMEF =	0.000 IN.
SEEF =	0.000 IN.	YMEF =	0.000 IN.
SEEF =	0.000 IN.	ZMEF =	0.000 IN.
SCALE =	0.000 SCALE		

BETA	=	-4.000	ELEVTR	=	-15.000
AILRON	=	.000	RUDDER	=	.000
RN/L	=	3.500			

PARAMETRIC DATA

$$\text{MACH} (1) = .61 \quad \text{ALPHA} (1) = 6.210$$

SECTION / 1' FUSELAGE

[illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (1) = .601 ALPHA (1) = 6.210

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PMI									
130.000									.0116
140.000									-.1441
150.000									-.0177
160.000									.0998
170.000									.1598
180.000	-.0735	.0186	.1018	.1318	.1648	.0934			

MACH (1) = .579 ALPHA (2) = 8.366

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI														
60.000	.0666	.0471	-.0669											
70.000	.0654	.0644	-.0510											
80.000	.0631	.0418	-.0548											
90.000		-.0544	-.2253	-.3250	-.2090	-.1493	.0000	-.1368	-.1546	-.1330	-.1346	-.0920	.0000	-.1283
100.000					-.2309	-.2116	-.1920	-.1536	-.1367	-.1309	-.1555	-.1223	-.1646	-.1169
110.000					-.2415	-.2422	-.2497	-.1979	-.1673	-.1658	-.1447	-.1491	.0000	-.1428
120.000					-.3004								.0000	
130.000					-.4914								-.1567	
140.000					-.4403								-.1415	
150.000					-.3331								-.1210	
160.000					-.2680								-.1185	
170.000					-.2670								-.1021	
180.000					-.2299	-.1851	-.1673	-.1508	-.1496	-.1090	-.1078	-.0892	-.0876	-.0772

X/L	.4500	.4880	.4880	.5050	.5240	.5460	.5610	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
90.000	-.1015	-.1082	-.1005	-.1021	-.0964	-.1516	-.1239	-.1453	-.1736	-.2286	-.2696	-.2807	-.2435	.0000
100.000	-.1236	-.1456	-.1434	-.1346	-.1361	-.1630	-.1599	-.1751	-.1680	-.2328	-.2593	-.2546	-.2112	-.1703
110.000	-.1510	-.1466	-.1696	-.1651	-.1778	-.1933	-.1767	-.1854	-.1829	-.2065	-.2273	-.2484	-.1944	-.1428
120.000						-.2112							-.1646	
130.000						-.1447							-.0943	
140.000						-.1298							-.1919	
150.000						-.1012							-.0822	
160.000						-.0912							-.0627	
170.000						-.0860							-.0558	
180.000	-.0887	-.0683	-.0772	-.0631	-.0794	-.0613	-.0807	-.1002	-.0909	-.0875	-.0925	-.0828	-.0543	-.0187

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A83

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (REC010)

MACH (1) = .600 ALPHA (5) = 14.550

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0670 .1260 .16 0 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

165.0000 -.3211
170.0000 -.3123
180.0000 -.2534 -.1672 -.1632 -.1535 -.1268 -.1082 -.1091 -.1000 -.0971 -.0977
X/L .4500 .4680 .4860 .5050 .5240 .5400 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.0000 -.2084 -.1880 -.1921 -.1905 -.2035 -.2471 -.2294 -.2795 -.3116 -.3752 -.3388 -.3678 -.4102 -.3868 .0000
100.0000 -.2496 -.2506 -.2474 -.2323 -.2164 -.2952 -.2892 -.3132 -.2992 -.3689 -.3248 -.3429 -.3460 -.3036 -.2521
110.0000 -.2835 -.2721 -.2977 -.3306 -.3019 -.3607 -.3075 -.3 25 -.3331 -.3596 -.3376 -.3482 -.3167 -.2874 -.2144
120.0000 -.3177
130.0000 -.2306
140.0000 -.2437
150.0000 -.2172
160.0000 -.1870
170.0000 -.1453
180.0000 -.0803 -.0962 -.0950 -.1168 -.1168 -.1088 -.1322 -.1150 -.1409 -.1527 -.1317 -.1127 -.1028 -.0897 -.0447
X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.0000 .1460
70.0000 .0796 .1574 .0000
80.0000 .0774 .0591 .0623
90.0000 -.2717 -.1788 -.1048 -.0608 -.0283 .0000 .0868 .0497 .0352
100.0000 -.2168 -.1125 -.0493 .0100 .0039 .0475
110.0000 -.1537 -.0877 .0011 .0755 .1574 .0686
120.0000 .0519
130.0000 -.0709
140.0000 -.2208
150.0000 -.1424
160.0000 .1435
170.0000 .0528
180.0000 -.1805 -.0032 .0380 .0940 .1678 .2462

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RCC010)

$$\text{MACH (1)} = .691 \quad \text{ALPHA (6)} = 16.695$$

SECTION (1) FUSELAGE

X/L	.0875	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PW															
60.000	-.0099	.0056	-.0864												
70.000	-.0463	.0038	-.0774												
80.000	-.1278	-.0855	-.1032												
90.000		-.1247	-.2974	-.4020	-.2794	-.2639	-.2639	.0000	-.2488	-.2585	-.2603	-.2628	-.2097	.0000	-.3607
100.000					-.3254	-.3145	-.3145	-.3142	-.2737	-.2585	-.2522	-.2628	-.2900	-.3224	-.2884
110.000					-.3842	-.3979	-.3979	-.4268	-.3767	-.3668	-.3444	-.3369	-.3142	.0000	-.3492
120.000					-.4754									.0000	.0000
130.000					-.7290								-.2783	-.2783	
140.000					-.5787								-.2188	-.2188	
150.000					-.4191								-.1738	-.1738	
160.000					-.3500								-.2116	-.2116	
170.000					-.3033								-.1451	-.1451	
180.000					-.2451	-.2083	-.1651	-.1467	-.1455	-.0901	-.0828	.1114	-.1102	-.1102	-.0935

FMI	-2355	-2273	-2421	-2323	-2403	-2903	-2765	-2961	-3414	-4234	-4143	-4509	-4630	-4608	.0000
90,000	-2605	-3010	-2994	-2783	-2714	-2972	-3175	-3410	-3265	-4204	-3926	-3932	-4081	-3460	-2869
100,000	-3649	-3173	-3662	-3696	-3561	-3721	-3606	-3426	-3801	-3659	-3882	-3843	-3628	-3045	-2508
110,000															
120,000						-2965							-2182		
130,000						-2629							-2263		
140,000													-2533		
150,000						-2914							-4149		
160,000													-2123		
170,000						-1516							-1115		
180,000	-1176	-0997	-1041	-1177	-1051	-1441	-1292	-1389	-1686	-1485	-1500	-1121	-1161	-0860	-0415

[illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (2) = .940 ALPHA (1) = 6.435

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2810 .3010 .3190 .3360 .3570 .3750 .3940 .4090 .4310

PMI

60.000 .2821 .2575 .1569
 70.000 .3064 .2712 .1671
 80.000 .2922 .2556 .1700
 90.000 .1628 -.0207 -.1434 .0015 .0342 .0000 .0975 .0619 .0830 .1007 .1276 .0000 .1152
 100.000 -.0044 .0140 .0408 .0667 .0923 .1009 .0862 .1134 .0900 .1093
 110.000 .0000 .0377 -.0175 -.0118 .0333 .0662 .0800 .0957 .1003 .0000 .0948
 120.000 .0000 .0878
 130.000 .0000 .2348
 140.000 .0000 .2282
 150.000 .0000 .1869
 160.000 .0000 .1674
 170.000 .0000 .1643
 180.000 .0000 .1763 -.0227 .0648 .0961 .1107 .1304 .1265 .1453 .1274 .1369

X/L

.4500 .4680 .4860 .5050 .5240 .5430 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PMI

90.000 .1432 .1360 .1362 .1488 .1367 .1146 .1272 .1161 .0840 .0321 .0103 -.0502 -.0611 -.0539 .0000
 100.000 .1155 .0956 .1110 .1146 .1256 .1075 .1025 .0831 .0831 .0018 .0031 -.0301 -.0498 -.0109 .0342
 110.000 .1038 .0899 .1116 .0953 .0974 .0809 .0865 .0736 .0630 .0461 .0225 -.0166 -.0016 .0094 .0504
 120.000 .0000 .0598
 130.000 .0000 .0845
 140.000 .0000 .0994
 150.000 .0000 .1292
 160.000 .0000 .1324
 170.000 .0000 .1329
 180.000 .1316 .1259 .1295 .1286 .1277 .1437 .1227 .1256 .1143 .1109 .1073 .1272 .1272 .1435 .1930

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

60.000 .3930
 70.000 .3459 .3678 .0000
 80.000 .3277 .2971 .2459
 90.000 .0324 .2187 .1915 .2292 .2732 .0000
 100.000 .0396 .1194 .1079 .2776 .2910 .2898
 110.000 .1027 .1584 .2792 .3404 .3436 .2788
 120.000 .2302
 130.000 .2231
 140.000 .0722
 150.000 .1865
 160.000 .2724
 170.000 .3233
 180.000 .1043 .1832 .2805 .3141 .3407 .3242

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECO10)

MACH (2) = .749 ALPHA (2) = 6.386

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.0906	.0565	-.0661											
70.000	.0995	.0612	-.0354											
80.000	.0731	.0707	-.0401											
90.000		-.0393	-.2400	-.4088	-.2452	-.1606	.0000	-.1375	-.1840	-.1479	-.1365	-.1036	.0000	-.1180
100.000					-.2595	-.2250	-.2128	-.1596	-.1575	-.1346	-.1533	-.1320	-.1582	-.1225
110.000					-.2933	-.2681	-.2766	-.2081	-.1892	-.1635	-.1430	-.1417	.0000	-.1564
120.000					-.3579								.0000	
130.000					-.5353								-.1509	
140.000					-.5309								-.1314	
150.000					-.4766								-.1149	
160.000					-.4950								-.1144	
170.000					-.5220								-.1036	
180.000					-.4997	-.3605	-.2219	-.1370	-.1025	-.0737	-.0771	-.0792	-.0876	-.0718
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880
PHI														
90.000	-.0939	-.0909	-.0951	-.0841	-.0912	-.1125	-.1191	-.1457	-.1850	-.2575	-.2757	-.3432	-.3919	-.3650
100.000	-.1229	-.1395	-.1440	-.1251	-.1159	-.1464	-.1535	-.1801	-.1812	-.2655	-.2711	-.3422	-.4	-.3238
110.000	-.1369	-.1356	-.1477	-.1550	-.1650	-.1802	-.1768	-.1941	-.2026	-.2399	-.2760	-.3254	-.2915	-.1960
120.000					-.1894								-.1903	
130.000					-.1527								-.1438	
140.000					-.1315								-.1181	
150.000					-.1051								-.1161	
160.000					-.1038								-.1049	
170.000					-.0911								-.0879	
180.000	-.0765	-.0657	-.0770	-.0965	-.0870	-.0906	-.1012	-.1126	-.1123	-.1364	-.1156	-.1231	-.1062	-.0430
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000							.2310							
70.000							.1657	.2056	.0000					
80.000							.1424	.1165	.0598					
90.000	-.2428	-.1091	-.0394	.0279	.0514	.0000	.1069	.0922	.0279					
100.000	-.1973	-.0777	-.0029	.0697	.0846	.1019								
110.000	-.1308	-.0412	.0569	.1392	.1521	.0998								
120.000					.0494									
130.000					.0115									
140.000					-.1687									
150.000					-.0160									
160.000					.0776									
170.000					.0739									
180.000	-.1362	.0211	.0707	.1050	.1367	.2054								

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD10)

MACH (2) = .748 ALPHA (3) = 10.530

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .0660 .0636 -.0429
70.000 .0631 .0604 -.0336
80.000 .0371 .0328 -.0379
90.000 -.0419 -.2473 -.4247100.000 -.2781 -.1787 .0000 .1547 -.2128 -.1802 -.1628 -.1370 .0000 -.1603
110.000 -.2737 -.2381 -.1875 -.1873 -.1701 -.1959 -.1716 -.2138 -.2138 -.1442
120.000 -.3141 -.2967 -.3006 -.2412 -.2185 -.2063 -.2117 -.2017 .0000 -.1861
130.000 -.3707 .0000
140.000 -.6268
150.000 -.5645
160.000 -.5909
170.000 -.5965
180.000 -.5209X/L .4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100
PHI
90.000 -.1136 -.1221 -.1116 -.0976 -.1221 -.1306 -.1415 -.1857 -.2309 -.2974 -.3303 -.3710 -.4339 -.3983 .0000
100.000 -.1326 -.1825 -.1751 -.1490 -.1466 -.1780 -.2182 -.2235 -.2153 -.3252 -.3134 -.3757 -.3944 -.3490 -.3024
110.000 -.1849 -.1648 -.1741 -.2033 -.1991 -.2384 -.2332 -.2467 -.2660 -.3037 -.3300 -.3526 -.3357 -.3131 -.2423
120.000 .0000
130.000 .1893
140.000 .1815
150.000 .1407
160.000 .1420
170.000 .1223
180.000 -.0770 -.0923 -.0944 -.1060 -.1103 -.1165 -.1373 -.1098 -.1264 -.1215 -.1399 -.1233 -.1274 -.1147 -.0827

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 .2004
70.000 .1317 .1896 .0000
80.000 .1047 .0936 .0386
90.000 .0808 .0622 .0154
100.000 .0000
110.000 .0627
120.000 .0871
130.000 .0567
140.000 .0142
150.000 -.1534
160.000 -.0610
170.000 .0860
180.000 .0366

X/L .1769 -.0001 .0620 .0961 .1461 .2442

DATE 24 MAR 74

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MACH (2) = .749 ALPHA (5) = 14.790

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3360 .3570 .3750 .3940 .4030 .4310

PHI

60.000 .0363 .0431 -.0441
 70.000 .0081 .0460 -.0394
 80.000 -.0696 .0052 -.0480
 90.000 -.0327 -.2421 -.4167 -.2979 -.2518 .0000 -.2255 -.2310 -.2316 -.2445 -.1914 .0000 -.2308
 100.000 -.3177 -.2902 -.2967 -.2668 -.2712 -.2315 -.2450 -.2408 -.2924 -.2382
 110.000 -.3621 -.3642 -.3852 -.3475 -.3167 -.3052 -.2879 -.2763 .0000 -.2816
 120.000 -.4200
 130.000 -.7019
 140.000 -.6528
 150.000 -.6042
 160.000 -.6195
 170.000 -.6959
 180.000 -.6710 -.4649 -.3382 -.2030 -.1401 -.0999 -.0744 -.0318 -.1626 -.0750
 .4500 .4780 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

X/L

PHI

90.000 -.1759 -.1698 -.1763 -.1540 -.1716 -.2097 -.1925 -.2335 -.2655 -.3669 -.4115 -.4990 -.4961 -.4899 .0000
 100.000 -.2287 -.2370 -.2402 -.2165 -.1929 -.2391 -.2689 -.2448 -.2687 -.3618 -.3867 -.4658 -.4788 -.4056 -.3345
 110.000 -.2846 -.2628 -.2630 -.2798 -.2738 -.3066 -.3013 -.3052 -.3298 -.3481 -.3781 -.4208 -.3784 -.3556 -.3147
 120.000 -.2612
 130.000 -.2508
 140.000 -.2713
 150.000 -.2482
 160.000 -.2078
 170.000 -.1586
 180.000 -.4100 -.1248 -.1264 -.1419 -.1348 -.1408 -.1594 -.1630 -.1884 -.1954 -.1965 -.1973 -.1916 -.1580 -.1092

X/L

PHI

60.000 .0622
 70.000 -.0490 .0823 .0000
 80.000 -.0462 .0004 .0188
 90.000 -.4122 -.3428 -.2229 -.2054 -.1707 .0000
 100.000 -.3294 -.2203 -.1640 -.1136 -.1123 -.1076
 110.000 -.2363 -.1329 -.0619 -.0117 -.0261 -.1092
 120.000 -.0529
 130.000 -.0920
 140.000 -.2272
 150.000 -.1820
 160.000 .0520
 170.000 -.0562
 180.000 -.2347 -.0107 .0155 .0667 .1121 .2789

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/OA63

(RECORD)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (2) = .732 ALPHA (6) = 16.860

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L .0670 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PHI

60.000 .0499 -.0369
70.000 .0117 -.0488
80.000 -.0979 -.0421
90.000 -.0837
100.000
110.000
120.000
130.000
140.000
150.000
160.000
170.000
180.000

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000
100.000
110.000
120.000
130.000
140.000
150.000
160.000
170.000
180.000

X/L

.7290 .7470 .7650 .7830 .8030 .8290 .8620 .9000 .9400

PHI

60.000
70.000
80.000
90.000
100.000
110.000
120.000
130.000
140.000
150.000
160.000
170.000
180.000

X/L

.9590 .9770 .9950 .0130 .0310 .0490 .0670 .0850 .1030 .1210 .1390 .1570 .1750 .1930 .2110

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECO10)

MACH (3) = .849 ALPHA (3) = 10.640

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3360	.3370	.3730	.3940	.4050	.4310
PHI														
60.000	.0961	.0973	-.0041											
70.000	.1802	.1024	-.0043											
80.000	.0966	.0903	.0142											
90.000		.0152	-.2008	-.4983	-.3679	-.1814	.0000	-.2070	-.2808	-.2247	-.1974	-.1543	.0000	-.1749
100.000				-.3521	-.2367	-.2832	-.2314	-.2522	-.2314	-.1990	-.2069	-.1749	-.2310	-.1637
110.000				-.3533	-.2893	-.2893	-.3482	-.3564	-.2866	-.2479	-.2264	-.2100	.0000	-.1936
120.000					-.3787								.0000	
130.000					-.4955								-.1966	
140.000					-.5570								-.1531	
150.000					-.6182								-.1347	
160.000					-.6585								-.1320	
170.000					-.6532								-.0983	
180.000					-.6711	-.6525	-.5819	-.4715	-.3664	-.2230	-.1441	-.0968	-.0582	-.0393

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1085	-.1102	-.0989	-.0751	-.0789	-.0964	-.0965	-.1245	-.1666	-.2523	-.2880	-.3815	-.4754	-.5141	.0000
100.000	-.1943	-.1837	-.1405	-.1167	-.1036	-.1315	-.1522	-.1722	-.1777	-.2329	-.2904	-.3741	-.4459	-.4540	-.5022
110.000	-.1787	-.1659	-.1589	-.1637	-.1613	-.1865	-.1763	-.2001	-.2340	-.2816	-.3204	-.3882	-.4091	-.4404	-.4250
120.000						-.1913								-.2666	
130.000						-.1445								-.2455	
140.000						-.1522								-.2350	
150.000						-.1372								-.2181	
160.000						-.1066								-.1792	
170.000						-.0980								-.1611	
180.000	-.0302	-.0368	-.0455	-.0545	-.0683	-.0856	-.0961	-.1178	-.1410	-.1510	-.1575	-.1573	-.1563	-.1454	-.0929

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PHI									
90.000							.1447		
100.000							.1514	.0000	
110.000							.0822	.0220	
120.000							.0333	-.0046	
130.000	-.5733	-.2403	-.1341	-.0846	-.0533	.0000			
140.000	-.4577	-.2014	-.0877	-.0345	-.0372	-.0312			
150.000	-.2989	-.1052	-.0064	.0166	-.0006	-.0354			
160.000						-.0044			
170.000						.0073			
180.000						-.1526			
190.000						-.0850			
200.000						.0675			
210.000						.0128			
220.000	-.3418	-.0192	.0262	.0898	.1340	.2367			

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OA63

PAGE 1345

MACH (3) = .832 ALPHA (5) = 14.920

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD10)

SECTION 111 FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2810 .3200 .3590 .3980 .4370 .4760 .5150 .5540 .5930 .6320 .6710 .7100 .7490 .7880 .8270 .8660 .9050 .9440 .9830 .10220

PHI

60.000 .0593 .0699 .0804 .0909 .1014 .1119 .1224 .1329 .1434 .1539 .1644 .1749 .1854 .1959 .2064 .2169 .2274 .2379 .2484 .2589 .2694 .2799 .2904 .3009 .3114 .3219 .3324 .3429 .3534 .3639 .3744 .3849 .3954 .4059 .4164 .4269 .4374 .4479 .4584 .4689 .4794 .4899 .4999 .5099 .5199 .5299 .5399 .5499 .5599 .5699 .5799 .5899 .5999 .6099 .6199 .6299 .6399 .6499 .6599 .6699 .6799 .6899 .6999 .7099 .7199 .7299 .7399 .7499 .7599 .7699 .7799 .7899 .7999 .8099 .8199 .8299 .8399 .8499 .8599 .8699 .8799 .8899 .8999 .9099 .9199 .9299 .9399 .9499 .9599 .9699 .9799 .9899 .9999

X/L

PHI

60.000 .0593 .0699 .0804 .0909 .1014 .1119 .1224 .1329 .1434 .1539 .1644 .1749 .1854 .1959 .2064 .2169 .2274 .2379 .2484 .2589 .2694 .2799 .2904 .3009 .3114 .3219 .3324 .3429 .3534 .3639 .3744 .3849 .3954 .4059 .4164 .4269 .4374 .4479 .4584 .4689 .4794 .4899 .4999 .5099 .5199 .5299 .5399 .5499 .5599 .5699 .5799 .5899 .5999 .6099 .6199 .6299 .6399 .6499 .6599 .6699 .6799 .6899 .6999 .7099 .7199 .7299 .7399 .7499 .7599 .7699 .7799 .7899 .7999 .8099 .8199 .8299 .8399 .8499 .8599 .8699 .8799 .8899 .8999 .9099 .9199 .9299 .9399 .9499 .9599 .9699 .9799 .9899 .9999

X/L

PHI

60.000 .0593 .0699 .0804 .0909 .1014 .1119 .1224 .1329 .1434 .1539 .1644 .1749 .1854 .1959 .2064 .2169 .2274 .2379 .2484 .2589 .2694 .2799 .2904 .3009 .3114 .3219 .3324 .3429 .3534 .3639 .3744 .3849 .3954 .4059 .4164 .4269 .4374 .4479 .4584 .4689 .4794 .4899 .4999 .5099 .5199 .5299 .5399 .5499 .5599 .5699 .5799 .5899 .5999 .6099 .6199 .6299 .6399 .6499 .6599 .6699 .6799 .6899 .6999 .7099 .7199 .7299 .7399 .7499 .7599 .7699 .7799 .7899 .7999 .8099 .8199 .8299 .8399 .8499 .8599 .8699 .8799 .8899 .8999 .9099 .9199 .9299 .9399 .9499 .9599 .9699 .9799 .9899 .9999

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OA63

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (5) = .632 ALPHA (6) = 17.010

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1200	.1640	.2030	.2420	.2840	.3310	.3190	.3380	.3570	.3770	.4030	.4310
PHI													
60.000	.0354	.0848	-.0079										
70.000	-.0215	.0702	.0030										
80.000	-.0829	.0084	.0045										
90.000		-.0110	-.2059	-.4807	-.3754	-.2807	.0000	-.2628	-.3091	-.3383	-.3213	-.2742	.0000
100.000					-.3565	-.3184	-.3273	-.3051	-.3684	-.3836	-.3218	-.2740	-.2636
110.000					-.4197	-.3986	-.3913	-.4175	-.4985	-.4449	-.3688	-.3302	.0000
120.000					-.5134								.0000
130.000					-.5561								-.2916
140.000					-.5721								-.2250
150.000					-.6258								-.2358
160.000					-.6492								-.1987
170.000					-.6875								-.1917
180.000					-.6835	-.6811	-.6219	-.5501	-.3984	-.3804	-.2162	-.1540	-.1359
													-.0772

X/L	.4570	.4880	.4880	.5050	.5240	.5460	.5610	.5800	.6170	.6380	.6540	.6730	.6880	.7100
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PHI

90.000	-.2085	-.1902	-.1861	-.1523	-.1463	-.1719	-.1510	-.1691	-.2306	-.3148	-.3887	-.5091	-.6014	-.6352
100.000	-.2920	-.2866	-.2274	-.1953	-.1646	-.2108	-.1909	-.2145	-.2157	-.3512	-.3656	-.4693	-.5364	-.5175
110.000	-.3096	-.2795	-.2177	-.2586	-.2487	-.2448	-.2337	-.2554	-.2682	-.3172	-.3899	-.4555	-.4474	-.4112
120.000						-.2400							-.3204	
130.000						-.2440							-.3018	
140.000						-.2468							-.3175	
150.000						-.2416							-.3551	
160.000						-.2045							-.3385	
170.000						-.1455							-.2438	
180.000	-.0733	-.0779	-.0827	-.1033	-.1096	-.1222	-.1344	-.1574	-.2259	-.2328	-.2543	-.2450	-.2255	-.1700

X/L	.7290	.7470	.7870	.7850	.8030	.8290	.8620	.9000	.9400					
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PHI

60.000														
70.000														
80.000														
90.000	-.6401	-.4934	-.3602	-.3099	-.3833	.0000								
100.000	-.5745	-.3144	-.2721	-.1573	-.2270	-.3503								
110.000	-.3047	-.2037	-.0739	-.0356	-.0801	-.2635								
120.000						-.0937								
130.000						-.1241								
140.000						-.2963								
150.000						-.2450								
160.000						-.0345								
170.000						-.2237								
180.000	-.3177	-.1552	-.0702	-.0004	.0753	.2980								

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TABULATED SOURCE DATA - 1A29/0A83

PAGE 1347

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (4) = .950 ALPHA (1) = 6.341

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
60.000	.1521	.1397	.0317												
70.000	.1937	.1612	.0454												
80.000	.1822	.1489	.0549												
90.000		.0703	-.1856	-.5080	-.4834	-.3838	.0000	-.3180	-.3818	-.3728	-.4078	-.0803	.0000	-.0228	
100.000					-.4890	-.4424	-.3946	-.3706	-.3860	-.3905	-.4877	-.4102	-.0803	-.0222	
110.000					-.3712	-.3151	-.4834	-.4617	-.4648	-.5099	-.5303	-.1039	.0000	-.0303	
120.000					-.5961								.0000		
130.000					-.8373								-.0928		
140.000					-1.0300								-.0780		
150.000					-.9715								-.0426		
160.000					-.9316								-.0381		
170.000					-.8685								-.0344		
180.000					-.7153	-.5584	-.4426	-.4563	-.2837	-.2038	-.1092	-.0385	-.0190	.0373	

X/L	.4500	.4880	.4880	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6750	.6880	.7100
PMI														
90.000	-.0020	.0154	.0181	.0326	.0412	.0253	.0292	.0099	-.0270	-.0834	-.1034	-.1650	-.2673	-.3109
100.000	-.0219	-.0151	-.0089	.0145	.0208	.0005	-.0092	-.0235	-.0288	-.1203	-.1087	-.1863	-.2546	-.3578
110.000	-.0171	-.0162	-.0128	-.0167	-.0119	-.0242	-.0297	-.0461	-.0673	-.1016	-.1367	-.2045	-.2360	-.3312
120.000					-.0448								-.2371	
130.000					-.0306								-.1711	
140.000					-.0337								-.1421	
150.000					-.0097								-.1443	
160.000					.0077								-.1208	
170.000					.0200								-.0953	
180.000	.0552	.0581	.0622	.0513	.0398	.0231	.0012	-.0163	-.0313	-.0503	-.0822	-.0723	-.0848	-.0910

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PMI									
60.000									
70.000									
80.000									
90.000	-.4112	-.2802	-.3294	-.1164	-.0303	.0000			
100.000	-.4148	-.4081	-.3458	-.0337	.0090	-.0015			
110.000	-.3461	-.3525	-.0679	.0219	.0235	-.0372			
120.000						-.0201			
130.000						.0561			
140.000						-.0708			
150.000						.0353			
160.000						.1234			
170.000						.0981			
180.000	-.3316	-.2387	.1091	.1620	.2331	.2941			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (4) = .954 ALPHA (2) = 0.611

SECTION (1) FUSELAGE

DEPENDENT VARIABLE (P)

X/L .0870 .1280 .1640 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .1344 .1499 .0481
 70.000 .1773 .1697 .0618
 80.000 .1934 .1715 .0748
 90.000 .0892 -.1174 -.4684
 100.000 .4496 -.3573 .0000
 110.000 -.4312 -.3828 -.3497
 120.000 -.5251 -.4878 -.4478
 130.000 -.5736
 140.000 -.8227
 150.000 -1.0400
 160.000 -.9873
 170.000 -.9352
 180.000 -.9022
 190.000 -.7456
 200.000 -.6064
 210.000 -.4589
 220.000 -.4089
 230.000 -.3598
 240.000 -.2640
 250.000 -.1621
 260.000 -.0821
 270.000 -.0509
 280.000 .0195

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 .0110 .0141 .0062 .0128 .0251 .0078 .0180 .0072 .0302 .01026 .01322 .02177 .03007 .03517
 100.000 -.0043 -.0235 -.0320 -.0135 .0020 .0216 .0231 .0322 .0391 .0460 .01411 .02239 .02949 .03181
 110.000 -.0424 -.0391 -.0409 -.0488 -.0393 .0617 .0552 .0636 .0801 .1280 .1776 .2442 .2874 .3276
 120.000 .0216
 130.000 .0516
 140.000 .0511
 150.000 .0229
 160.000 .0218
 170.000 .0265
 180.000 .0451 .0458 .0458 .0451 .0166 .0006 .0256 .0427 .0688 .0971 .1211 .1222 .0837

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 .1400
 70.000 .0730 .1884 .0000
 80.000 .0250 .1149 .0928
 90.000 -.4532 -.3618 -.4176 -.2240 -.1080 .0000
 100.000 -.4472 -.4514 -.2992 -.1326 -.0936 -.0780
 110.000 -.3788 -.4160 -.0983 -.0376 -.0627 -.1068
 120.000 -.0408
 130.000 .0341
 140.000 -.0939
 150.000 -.0218
 160.000 .1133
 170.000 .0305
 180.000 -.3744 -.0859 .0969 .1596 .2208 .3195

DATE 24 MAR 74

TABULATED SOURCE DATA - 1429/0483

PAGE 1349

MACH (4) = .949 ALPHA (3) = 10.780

AMES 86-83D PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.9870	.1200	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3730	.3940	.4050	.4310
PHI														
90.000	.1321	.1466	.0542											
70.000	.1409	.1601	.0691											
80.000	.1076	.1506	.0764											
90.000		.0997	-.1169	-.4421	-.4241	-.3584	.0000	-.2845	-.3395	-.3600	-.3973	-.3769	.0000	-.0499
100.000					-.4266	-.3679	-.3676	-.3326	-.3564	-.3780	-.4510	-.4499	-.5082	-.1566
110.000					-.5059	-.4713	-.4549	-.4366	-.4735	-.4944	-.5305	-.5355	.0000	-.0724
120.000					-.5802								.0000	
130.000					-.8536								-.2051	
140.000					-1.0670								-.1593	
150.000					-1.0210								-.1140	
160.000					-.9159								-.0729	
170.000					-.8268								-.0510	
180.000					-.7214	-.5879	-.5012	-.4434	-.4067	-.3137	-.1978	-.1247	-.0437	-.0074

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
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PHI

90.000	.0024	.0093	-.0043	.0181	.0149	-.0097	-.0024	-.0645	-.1445	-.1928	-.2662	-.3412	-.3800	.0000
100.000	-.0251	-.0834	-.0516	-.0217	-.0038	-.0368	-.0300	-.0746	-.1695	-.1945	-.2635	-.3226	-.3506	-.4517
110.000	-.0859	-.0479	-.0818	-.0759	-.0670	-.0902	-.0887	-.1031	-.1295	-.1797	-.2284	-.2617	-.3141	-.4356
120.000						-.0873							-.3002	
130.000						-.0827							-.2658	
140.000						-.1049							-.2512	
150.000						-.0430							-.2637	
160.000						-.0117							-.2331	
170.000						-.0039							-.1660	
180.000	.0326	.0423	.0575	.0480	.0373	.0160	-.0019	-.0224	-.0468	-.0724	-.0965	-.1207	-.1413	-.1526

X/L

X/L	.7290	.7470	.7670	.7890	.8030	.8290	.8620	.9000	.9400
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PHI

90.000							.0276		
70.000							.1378	.0000	
80.000							.0600	.0744	
90.000	-.5051	-.4730	-.4739	-.3720	-.2515	.0000	.0267	.0360	
100.000	-.4975	-.5080	-.3368	-.1925	-.1954	-.1532			
110.000	-.4241	-.3978	-.1566	-.1037	-.1617	-.1917			
120.000						-.0904			
130.000						-.0141			
140.000						-.1223			
150.000						-.0677			
160.000						-.1093			
170.000						-.0181			
180.000	-.4254	-.0930	.0332	.1026	.1830	.3147			

TABULATED SOURCE DATA - 1A29/OA63

DATE 24 MAR 74

(RECD10)

JAMES 06-030 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACH} (4) = .349 \quad \text{ALPHA} (5) = 14.940$$

DEPENDENT VARIABLE CP

SECTION (1) FISSELAGE

0.0070	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
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244

[illegible]

✓

	.4500	.4600	.4660	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.3069	-.1302	-.0498	-.0184	-.0028	-.0336	-.0494	-.0597	-.1129	-.1942	-.2379	-.3442	-.4265	-.4621
100.000	-.3535	-.1102	-.0418	-.0877	-.0316	-.0541	-.1008	-.1036	-.1192	-.2346	-.2262	-.3236	-.3800	-.4057
110.000	-.2463	-.1009	-.1131	-.1138	-.0977	-.1111	-.1355	-.1530	-.1774	-.2172	-.2632	-.3319	-.3554	-.4032
120.000						-.1188							-.3366	
130.000						-.1467							-.3227	
140.000						-.1651							-.3095	
150.000						-.0942							-.3473	
160.000						-.0873							-.3124	
170.000						-.0360							-.2495	
180.000	-.0898	.0284	-.0107	.0365	.0347	-.0050	-.0255	-.0476	-.0783	-.1145	-.1390	-.1725	-.1911	-.2089
/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					

PHI

[illegible]

TABULATED SOURCE DATA - 1A29/OA63

JAMES 00-030 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

$$\text{MACW} (4) = .940 \quad \text{ALPHA} (6) = 17.050$$

DEPENDENT VARIABLE CP

x/L	.0875	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3730	.3940	.4050	.4310
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PHI

[illegible]

1

[illegible]

III

[illegible]

TABULATED SOURCE DATA : 1A29/0A03

DATE 24 MAR 74

(RECORD)

AMES 60-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (5) = 1.048 ALPHA (1) = 6.814

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
Phi															
60.000	.2475	.2616	.1623												
70.000	.3037	.2821	.1819												
80.000	.2930	.2746	.1940												
90.000		.2036	-.0904	-.3216	-.3220	-.2476	.0000	-.2066	-.2668	-.2693	-.2667	-.2682	.0000	-.3140	
100.000					-.3212	-.3066	-.2774	-.2315	-.2681	-.2836	-.3282	-.3230	-.3675	-.2965	
110.000					-.3687	-.3744	-.3526	-.3377	-.3584	-.3679	-.3796	-.3764	.0000	-.2571	
120.000					-.4087								.0000		
130.000					-.6264								-.2500		
140.000					-.8026								-.2267		
150.000					-.7508								-.2033		
160.000					-.7139								-.1895		
170.000					-.6689								-.1752		
180.000					-.5484	-.4856	-.4179	-.3926	-.3700	-.3075	-.2439	-.1732	-.1453	-.0976	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
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Phi															
90.000	-.2403	-.2006	-.2103	-.1750	-.1306	-.0019	.0788	.0865	.0616	.0069	-.0033	-.0820	-.1543	-.2032	.0000
100.000	-.2317	-.2273	-.2224	-.1965	-.1394	-.0124	.0439	.0559	.0533	-.0209	-.0070	-.0878	-.1497	-.1731	-.2454
110.000	-.2273	-.2191	-.2084	-.2094	-.1587	-.0386	.0275	.0296	.0135	-.0122	-.0444	-.1014	-.1115	-.1832	-.2250
120.000					-.0537									-.1586	
130.000					-.0285									-.0987	
140.000					-.0228									-.0725	
150.000					.0016									-.0706	
160.000					.0016									-.0494	
170.000					.0177									-.0260	
180.000	-.0637	-.0925	-.0610	-.0730	-.0460	.0160	.0357	.0316	.0420	.0399	.0244	.0043	-.0213	-.0184	.0072

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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Phi									
60.000							.1910		
70.000							.1209	.2406	.0000
80.000							.0796	.1645	.1810
90.000	-.2877	-.1875	-.2665	-.2039	-.0854	.0000	.0367	.1230	.1526
100.000	-.2855	-.2932	-.3100	-.0669	-.0325	.0162			
110.000	-.2366	-.2743	-.0485	.0674	.0535	-.0062			
120.000						.0191			
130.000						.1367			
140.000						.0185			
150.000						.1294			
160.000						.2039			
170.000						.1292			
180.000	-.2341	-.1211	.1951	.2501	.3040	.3688			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (3) = 1.032 ALPHA (2) = 8.791

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PHI

60.000 .2613 .2640 .1704
 70.000 .2676 .2606 .1616
 80.000 .2604 .2626 .2001
 90.000 .2140 -.0332 -.3073 -.3081 -.2154 .0000 -.1709 -.2294 -.2385 -.2611 -.2611 .0000 -.3364
 100.000 -.3094 -.2704 -.2331 -.2125 -.2302 -.2568 -.3096 -.3217 -.3785 -.3503
 110.000 -.3710 -.3293 -.3098 -.2941 -.3246 -.3493 -.3827 -.3998 .0000
 120.000 -.4141
 130.000 -.6404
 140.000 -.8388
 150.000 -.7953
 160.000 -.7463
 170.000 -.7094
 180.000 -.8728
 190.000 -.4082 -.3749 -.3518 -.2815 -.2223 -.1528 -.1388 -.0984

X/L

.4500 .4680 .4660 .5050 .5240 .5460 .5510 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.3030 -.3020 -.2624 -.2065 -.1775 .0216 .1108 .1073 .0726 .0057 -.0226 -.1021 -.1717 -.2052 .0000
 100.000 -.3564 -.3197 -.2517 -.2112 -.1816 .0314 .0764 .0732 .0595 -.0310 -.0350 -.1017 -.1637 -.1816 -.2785
 110.000 -.3166 -.2909 -.2354 -.2300 -.2029 .0014 .0531 .0375 .0055 -.0304 -.0713 -.1239 -.1553
 120.000 -.0261
 130.000 -.0499
 140.000 -.0202
 150.000 .0203
 160.000 .0279
 170.000 .0377
 180.000 -.0799 -.0736 -.0611 -.0611 -.0209 .0529 .0664 .0680 .0610 .0417 .0349 .0.60 -.0009 -.0198 -.0265

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 .1658
 70.000 .0859 .2627 .0000
 80.000 .0471 .1925 .2106
 90.000 -.3236 -.2602 -.2669 -.2577 -.1645 .0000
 100.000 -.3075 -.3269 -.3046 -.1036 -.0979 -.1098
 110.000 -.2679 -.3234 -.0559 .0213 -.0110 .0193
 120.000 .1286
 130.000 .0151
 140.000 .1048
 150.000 .2349
 160.000 .0840
 170.000
 180.000 -.2675 -.0316 .1767 .2425 .3187 .4661

(RECORD)

AMES 64-430 PRESSURE VENTING - SHUTTLE ORBITER

MACH (3) = 1.043 ALPHA (3) = 10.800

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0875	.1200	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI														
90.000	.2332	.2324	.1731											
100.000	.2483	.2693	.1891											
110.000	.2129	.2643	.2011											
120.000		.2152		-.0247	-.2974	-.2939	.0000	-.1926	-.2533	-.2501	-.2661	-.2647	.0000	-.3239
130.000					-.2947	-.2719	-.2516	-.2350	-.2566	-.2742	-.3228	-.3323	-.3937	-.3624
140.000					-.3541	-.3307	-.3326	-.3214	-.3529	-.3729	-.4004	-.4199	.0000	-.4428
150.000						-.4160							.0000	
160.000						-.6574							-.3311	
170.000						-.8726							-.2743	
180.000						-.8400							-.2288	
190.000						-.7862							-.2017	
200.000						-.7490							-.1706	
210.000						-.6096	-.4541	-.4252	-.3803	-.2908	-.2208	-.1598	-.1386	-.0998

X/L	.4500	.4680	.4880	.5050	.5240	.5460	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
90.000	-.3141	-.3400	-.3642	-.3804	-.2808	-.1161	.1240	.1227	.0706	.0055	-.0572	-.1393	-.2251	-.2578
100.000	-.3754	-.4148	-.4302	-.3073	-.2529	-.0859	.0964	.0830	.0612	-.0410	-.0844	-.1412	-.2111	-.2285
110.000	-.4634	-.4403	-.3163	-.3061	-.2743	-.1283	.0518	.0342	.0034	-.0443	-.1065	-.1697	-.2082	-.3010
120.000						-.0665							-.1935	
130.000						-.1312							-.1548	
140.000						-.0131							-.1397	
150.000						.0231							-.1536	
160.000						.0206							-.0981	
170.000						.0390							-.0650	
180.000	-.0846	-.0493	-.0535	-.0571	-.0058	.0622	.0669	.0698	.0641	.0442	.0241	-.0046	-.0317	-.0626

X/L	.7290	.7470	.7670	.7850	.8030	.8230	.8520	.9000	.9400					
PMI														
90.000							-.0151							
100.000							-.0823	.1500	.0700					
110.000							-.1015	.0614	.1633					
120.000							-.0984	.0277	.1351					
130.000	-.3601	-.3492	-.3910	-.3016	-.2292	.0000								
140.000	-.3532	-.3993	-.3632	-.1317	-.1504	-.1276								
150.000	-.3151	-.3748	-.1290	-.0070	-.0877	-.1808								
160.000						-.0194								
170.000						.0799								
180.000						-.0103								
190.000						.0427								
200.000						.2250								
210.000	-.3098	-.0432	.1631	.2429	.3339	.5070								

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (3) = 1.031 ALPHA (4) = 12.900

SECTION (1) FUSELAGE
DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
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PMI															
60.000	.2379	.2535	.1870												
70.000	.2223	.2608	.2020												
80.000	.1785	.2359	.2113												
90.000		.2232	.0071	-.2601	-.2576	-.2009	.0000	-.1579	-.1831	-.2071	-.2327	-.2468	.0000	-.3223	
100.000					-.2576	-.2426	-.2135	-.1918	-.2188	-.2302	-.3033	-.3112	-.3407	-.3380	
110.000					-.3262	-.2965	-.2998	-.2837	-.3260	-.3597	-.3850	-.4068	.0000	-.4294	
120.000					-.3969								-.3951		
130.000					-.6467								-.3187		
140.000					-.8749								-.2410		
150.000					-.8503								-.1954		
160.000					-.7955								-.1573		
170.000					-.7544								-.1199	-.0812	
180.000					-.6178	-.5268	-.4419	-.4078	-.3599	-.2686	-.1968	-.1395	-.1199	-.0812	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6980	.7100
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PMI															
90.000	-.3008	-.3248	-.3628	-.3369	-.3202	.0406	.1525	.1568	.0929	.0102	-.0513	-.1384	-.2169	-.2544	.0000
100.000	-.3572	-.4044	-.4178	-.3848	-.3222	.1191	.1304	.1202	.0770	-.0347	-.0627	-.1427	-.2016	-.2288	-.3286
110.000	-.4515	-.4484	-.4302	-.3620	-.2120	.0691	.0910	.0652	.0118	-.0433	-.1119	-.1740	-.1975	-.2436	-.3110
120.000						-.0067								-.1901	
130.000						-.1646								-.1582	
140.000						-.0087								-.1335	
150.000						.0458								-.1648	
160.000						.0820								-.1117	
170.000	-.0721	-.0825	-.0215	.0203	.1035	.1095	.1035	.0998	.0768	.0525	.0317	.0036	-.0237	-.0532	-.0716
180.000															

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI									
60.000									
70.000									
80.000									
90.000	-.3977	-.3923	-.4366	-.3517	-.2791	.0000			
100.000	-.3838	-.4028	-.4429	-.1852	.1754	-.2466			
110.000	-.3218	-.3875	-.1788	-.0414	-.0903	-.2333			
120.000						-.0268			
130.000						.0625			
140.000						-.0215			
150.000						.0402			
160.000						.2438			
170.000						.0652			
180.000	-.3184	-.1908	.1576	.2441	.3453	.5542			

$$\text{MACH} (3) = 1.050 \quad \text{ALPHA} (3) = 19.040$$

SECTION / SURFILLAGE

011334

[illegible][illegible][illegible]

FMI					
60.000					
70.000					
80.000					
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960.000					
970.000					
980.000					
990.000					
1000.000					

AVES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (S) = 1.046 ALPHA (B) = 17.070

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PMI

60.000 .1726 .2230 .1753
 70.000 .1232 .2124 .1661
 80.000 .0966 .1762 .1664
 90.000 .1095 .0048 -.2434
 100.000 .2390 .1748 .0000
 110.000 .2390 .2164 .1945
 120.000 .3095 .2721 .2636
 130.000 .3912
 140.000 .6584
 150.000 .9180
 160.000 .9116
 170.000 .6615
 180.000 .8785
 190.000 .6545
 200.000 .5532
 210.000 .4613
 220.000 .4061
 230.000 .3381
 240.000 .2266
 250.000 .1537
 260.000 .1001
 270.000 .0754
 280.000 .0226
 290.000 .0000
 300.000 .0000
 310.000 .0000
 320.000 .0000
 330.000 .0000
 340.000 .0000
 350.000 .0000
 360.000 .0000
 370.000 .0000
 380.000 .0000
 390.000 .0000
 400.000 .0000
 410.000 .0000
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X/L

PMI

90.000 .2790 .2956 .3319
 100.000 .3494 .3644 .3694
 110.000 .4322 .4070 .3752
 120.000 .4322 .4070 .3752
 130.000 .4322 .4070 .3752
 140.000 .4322 .4070 .3752
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 390.000 .4322 .4070 .3752
 400.000 .4322 .4070 .3752
 410.000 .4322 .4070 .3752
 420.000 .4322 .4070 .3752
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 450.000 .4322 .4070 .3752
 460.000 .4322 .4070 .3752
 470.000 .4322 .4070 .3752
 480.000 .4322 .4070 .3752
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 1000.000 .4322 .4070 .3752

X/L

PMI

90.000 .2790 .2956 .3319
 100.000 .3494 .3644 .3694
 110.000 .4322 .4070 .3752
 120.000 .4322 .4070 .3752
 130.000 .4322 .4070 .3752
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 900.000 .4322 .4070 .3752
 910.000 .4322 .4070 .3752
 920.000 .4322 .4070 .3752
 930.000 .4322 .4070 .3752
 940.000 .4322 .4070 .3752
 950.000 .4322 .4070 .3752
 960.000 .4322 .4070 .3752
 970.000 .4322 .4070 .3752
 980.000 .4322 .4070 .3752
 990.000 .4322 .4070 .3752
 1000.000 .4322 .4070 .3752

DATE 24 MAR 74

TABULATED SOURCE DATA - 1429/0463

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (0) = 1.094 ALPHA (1) = 6.367

SECTION (1) FUELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
60.000	.2913	.3129	.2046												
70.000	.3449	.3243	.2232												
80.000	.3397	.3090	.2437												
90.000		.2551	-.0056	-.2532	-.2540	-.1723	.0000	-.1483	-.2005	-.2003	-.2055	-.1872	.0000	-.2296	
100.000				-.2344	-.2271	-.2229	-.1942	-.2096	-.2144	-.2419	-.2336	-.2635	-.1907		
110.000				-.3224	-.2902	-.2921	-.2700	-.2985	-.3010	-.3038	-.2889	.0000	-.1633		
120.000				-.3416								.0000			
130.000				-.5531								-.1619			
140.000				-.7193								-.1365			
150.000				-.6692								-.1148			
160.000				-.6346								-.0968			
170.000				-.5934								-.0811			
180.000				-.4753	-.4118	-.3574	-.3272	-.3317	-.2870	-.1666	-.0876	-.0577	-.0193		

X/L	.4900	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PHI									
60.000	-.1473	-.0944	-.1867	-.1511	-.1404	-.1110	.1627	.1721	.1301
70.000	-.1369	-.1441	-.1926	-.1611	-.1416	-.1208	.1526	.1269	.1212
80.000	-.1222	-.1472	-.1760	-.1634	-.1615	-.1394	.1118	.1016	.0902
90.000						-.1110			
100.000						.1096			
110.000						.1036			
120.000						.1163			
130.000						.1069			
140.000						.1306			
150.000						.1324			
160.000	.0136	-.0485	-.0541	-.0500	-.0432	.1324	.1234	.1061	.1041
170.000									
180.000									

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PHI									
60.000							.2224		
70.000							.1528	.3127	.0000
80.000							.1145	.2505	.2867
90.000	-.2136	-.1436	-.2098	-.1450	-.0537	.0000	.1007	.2220	.2750
100.000	-.2116	-.2293	-.2537	-.0104	.0176	.0995			
110.000	-.1742	-.2104	-.0586	.1122	.1064	.0950			
120.000						.1455			
130.000						.2462			
140.000						.4448			
150.000						.2523			
160.000						.3221			
170.000						.2370			
180.000	-.1666	-.1684	.2408	.2682	.3573	.4775			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD19)

$$\text{MACH} (0) = 1.192 \quad \text{ALPHA} (2) = 0.723$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.2820	.3010	.3190	.3380	.3370	.3730	.3940	.4030	.4310
PHI															
60.000	.3014	.3226	.2364												
70.000	.3370	.3427	.2459												
80.000	.2981	.3477	.2629												
90.000		.2744	.0366	-.2227	-.2290	-.1787	.0000	-.1331	-.1853	-.1942	-.944	-.1785	.0000	-.2359	
100.000					-.2288	-.2289	-.1960	-.1709	-.1869	-.2090	-.2370	-.2262	-.2825	-.2475	
110.000					-.2839	-.2834	-.2643	-.2480	-.2810	-.2967	-.2931	-.3004	.0000	-.3072	
120.000					-.3240								.0000		
130.000					-.5427								-.1735		
140.000					-.7320								-.1356		
150.000					-.6952								-.1077		
160.000					-.6487								-.0843		
170.000					-.6298								-.0535		
180.000					-.5007	-.4355	-.3668	-.3244	-.3135	-.2420	-.1244	-.0552	-.0355	.0017	
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6980	.7100
PHI															
90.000	-.2260	-.2643	-.2883	-.2203	-.0571	.2216	.2025	.1871	.1513	.0860	.0983	.0308	-.0444	-.0940	.0000
100.000	-.2819	-.3233	-.2641	-.1448	-.1402	.2133	.1693	.1521	.1383	.0500	.0879	.0251	-.0339	-.0658	-.1939
110.000	-.3372	-.2622	-.2114	-.1933	-.0952	.1740	.1340	.1180	.0876	.0634	.0563	.0085	-.0235	-.0840	-.1764
120.000					.1212									-.0343	
130.000					.0962									.0174	
140.000					.1004									.0308	
150.000					.1387									.0146	
160.000					.1340									.0488	
170.000					.1367									.0608	
180.000	-.0437	-.0427	-.0179	.0868	.1305	.1507	.1628	.1450	.1294	.1403	.1512	.1349	.1001	.0630	.0315
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PHI															
60.000							.2725								
70.000							.2116	.3555	.0000						
80.000							.1538	.2818	.2826						
90.000	-.2448	-.1977	-.2231	-.1939	-.0832	.0000	.1362	.2236	.2460						
100.000	-.2327	-.2405	-.1829	-.0473	-.0039	.0720									
110.000	-.1927	-.1965	-.0041	.0958	.1086	.0491									
120.000					.1151										
130.000					.2226										
140.000					.1171										
150.000					.1977										
160.000					.3225										
170.000					.2033										
180.000	-.1869	.1193	.2353	.3049	.3968	.5570									

TABULATED SOURCE DATA - IA29/OA63

DATE 24 MAR 74

(RECD10)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACM} (6) = 1.151 \quad \text{ALPHA} (3) = 10.865$$

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

	0.9875	.1250	.1640	.2030	.2420	.2810	.3190	.3580	.3970	.4350	.4730
100	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
101	100.9875	101.2500	101.5160	101.7820	102.0480	102.3140	102.5800	102.8460	103.1120	103.3780	103.6440
102	101.9750	102.2500	102.5160	102.7820	103.0480	103.3140	103.5800	103.8460	104.1120	104.3780	104.6440
103	102.9625	103.2500	103.5160	103.7820	104.0480	104.3140	104.5800	104.8460	105.1120	105.3780	105.6440
104	103.9500	104.2500	104.5160	104.7820	105.0480	105.3140	105.5800	105.8460	106.1120	106.3780	106.6440
105	104.9375	105.2500	105.5160	105.7820	106.0480	106.3140	106.5800	106.8460	107.1120	107.3780	107.6440
106	105.9250	106.2500	106.5160	106.7820	107.0480	107.3140	107.5800	107.8460	108.1120	108.3780	108.6440
107	106.9125	107.2500	107.5160	107.7820	108.0480	108.3140	108.5800	108.8460	109.1120	109.3780	109.6440
108	107.9000	108.2500	108.5160	108.7820	109.0480	109.3140	109.5800	109.8460	110.1120	110.3780	110.6440
109	108.8875	109.2500	109.5160	109.7820	110.0480	110.3140	110.5800	110.8460	111.1120	111.3780	111.6440
110	109.8750	110.2500	110.5160	110.7820	111.0480	111.3140	111.5800	111.8460	112.1120	112.3780	112.6440
111	110.8625	111.2500	111.5160	111.7820	112.0480	112.3140	112.5800	112.8460	113.1120	113.3780	113.6440
112	111.8500	112.2500	112.5160	112.7820	113.0480	113.3140	113.5800	113.8460	114.1120	114.3780	114.6440
113	112.8375	113.2500	113.5160	113.7820	114.0480	114.3140	114.5800	114.8460	115.1120	115.3780	115.6440
114	113.8250	114.2500	114.5160	114.7820	115.0480	115.3140	115.5800	115.8460	116.1120	116.3780	116.6440
115	114.8125	115.2500	115.5160	115.7820	116.0480	116.3140	116.5800	116.8460	117.1120	117.3780	117.6440
116	115.8000	116.2500	116.5160	116.7820	117.0480	117.3140	117.5800	117.8460	118.1120	118.3780	118.6440
117	116.7875	117.2500	117.5160	117.7820	118.0480	118.3140	118.5800	118.8460	119.1120	119.3780	119.6440
118	117.7750	118.2500	118.5160	118.7820	119.0480	119.3140	119.5800	119.8460	120.1120	120.3780	120.6440
119	118.7625	119.2500	119.5160	119.7820	120.0480	120.3140	120.5800	120.8460	121.1120	121.3780	121.6440
120	119.7500	120.2500	120.5160	120.7820	121.0480	121.3140	121.5800	121.8460	122.1120	122.3780	122.6440
121	120.7375	121.2500	121.5160	121.7820	122.0480	122.3140	122.5800	122.8460	123.1120	123.3780	123.6440
122	121.7250	122.2500	122.5160	122.7820	123.0480	123.3140	123.5800	123.8460	124.1120	124.3780	124.6440
123	122.7125	123.2500	123.5160	123.7820	124.0480	124.3140	124.5800	124.8460	125.1120	125.3780	125.6440
124	123.7000	124.2500	124.5160	124.7820	125.0480	125.3140	125.5800	125.8460	126.1120	126.3780	126.6440
125	124.6875	125.2500	125.5								

PMI

[illegible]

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[illegible]

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II

60.000	-.2844	-.2489	-.2602	-.2274	-.1636	.0000	.0405
70.000	-.2301	-.2780	-.2597	-.0646	-.0794	-.1076	-.0364
80.000	-.2264	-.2798	-.0551	.0642	.0081	-.1066	-.0284
90.000						.0698	.1601
100.000						.0709	.1358
110.000						.3032	.1246
120.000	-.2202	.0106	-.2284	.3011	.3942	.5790	.2286
130.000							.1528
140.000							.1029
150.000							.2349
160.000							.2010

DATE 24 MAR 74 TABULATED SOURCE DATA - 1429/0463

(RECORD)

AMES 64-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (6) = 1.098 ALPHA (9) = 15.030

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0670	.1280	.1840	.2030	.2420	.2640	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI														
80.000	.2713	.3097	.2483											
70.000	.2455	.3093	.2601											
60.000	.1971	.2634	.2634											
50.000		.2816	.1097	.1630	-.1594	-.1021	.0000	-.0589	-.0863	-.1031	-.1222	-.1474	.0000	-.2251
100.000					-.1719	-.1226	-.1013	-.0669	-.1126	-.1448	-.1636	-.2077	-.2377	-.2426
110.000					-.2258	-.1912	-.2025	-.1822	-.2199	-.2546	-.2892	-.3129	.0000	-.3346
120.000					-.3063								.0000	
130.000					-.5615								-.4396	
140.000					-.7963								-.3203	
150.000					-.7609								-.1436	
160.000					-.7295								-.0802	
170.000					-.6844								-.0336	
180.000					-.5441	-.4450	-.3585	-.3135	-.2501	-.1469	-.0774	-.0175	-.0043	.0293

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	-.1995	-.2177	-.2489	-.2116	-.1763	.1329	.2172	.2070	.1356	.0395	-.0181	-.1102	-.1821	-.2209	.0000
100.000	-.2680	-.2977	-.3051	-.2463	-.1732	.1810	.1983	.1681	.1449	-.0148	-.0252	-.1037	-.1350	-.1767	-.2772
110.000	-.3471	-.3310	-.2959	-.2112	-.0952	.1491	.1453	.1162	.0586	-.0164	-.0696	-.1164	-.1371	-.1741	-.2512
120.000					.0677									-.1252	
130.000					-.0538									-.0919	
140.000					-.0659									-.0758	
150.000					.1209									-.1250	
160.000					.1460									-.0674	
170.000					.1576									-.0274	
180.000	.0488	.0498	.1056	.1566	.1810	.1769	.1637	.1490	.1177	.0849	.0727	.0462	.0233	.0019	-.0479

.9400

X/L

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PMI									
90.000									
70.000									
60.000									
50.000	-.3629	-.3143	-.3867	-.3783	-.2732	.0000			
100.000	-.3639	-.3777	-.4183	.1816	-.1587	-.2071			
110.000	-.2676	-.3477	-.1705	-.0166	-.0556	-.1765			
120.000					.0194				
130.000					.0878				
140.000					.0212				
150.000					.0979				
160.000					.3008				
170.000					.1091				
180.000	-.2666	-.1972	.1954	.2641	.4003	.6060			

-.1563

PMI

90.000

70.000

60.000

50.000

100.000

110.000

120.000

130.000

140.000

150.000

160.000

170.000

180.000

PMI

90.000

70.000

60.000

50.000

100.000

110.000

120.000

130.000

140.000

150.000

160.000

170.000

180.000

PMI

90.000

70.000

60.000

50.000

100.000

110.000

120.000

130.000

140.000

150.000

160.000

170.000

180.000

PMI

90.000

70.000

60.000

50.000

100.000

110.000

120.000

130.000

140.000

150.000

160.000

170.000

180.000

AMES 00-030 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (0) = 1.099 ALPHA (0) = 17.950

SECTION (1) FUSELAGE DEFLECTION VARIABLE CF

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
PHI															
60.000	.2314	.3021	.2497												
70.000	.2587	.2875	.2583												
80.000	.1309	.2595	.2631												
90.000			.2682	.0910	-.1534	-.1149	-.0842	.0000	-.0466	-.0793	-.1033	-.1253	-.1356	.0000	-.2193
100.000						-.1600	-.1241	-.1013	-.0819	-.1118	-.1477	-.1784	-.1970	-.2227	-.2340
110.000						-.2157	-.1804	-.1806	-.1745	-.2199	-.2570	-.2783	-.2997	.0000	-.3317
120.000						-.2982								.0000	
130.000						-.5561								-.6307	
140.000						-.8074								-.4903	
150.000						-.7995								-.2280	
160.000						-.7501								-.5556	
170.000						-.6957								-.10225	
180.000						-.5541	-.4513	-.3603	-.3056	-.2312	-.1348	-.0578	-.0103	.0183	.0593

X/L	.4500	.4880	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1196	-.2052	-.2456	-.2117	-.1870	-.1938	.1078	.2030	.1436	.0342	-.0313	-.1617	-.2551	-.2901	.0000
100.000	-.2613	-.2919	-.3019	-.2456	-.2048	-.1807	.1265	.1867	.1517	.0011	-.0139	-.1327	-.2031	-.2177	-.3046
110.000	-.3391	-.3195	-.2954	-.2854	-.2354	-.1276	.1070	.1288	.0893	.0100	-.0495	-.1394	-.1844	-.2061	-.2623
120.000						-.0170								-.1478	
130.000						-.0968								-.1078	
140.000						-.2168								-.0988	
150.000						.0241								-.1761	
160.000						.0935								-.1227	
170.000						.1318								-.10686	
180.000	.0764	.0419	.0490	.0868	.1136	.1530	.1554	.1509	.1180	.0879	.0643	.0294	-.0044	-.0349	-.0793

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
60.000							-.2537		
70.000							-.2225	-.3396	.0000
80.000							-.2455	-.2977	-.3256
90.000	-.4136	-.3459	-.4188	-.4188	-.3441	.0000	-.3126	-.1912	-.3218
100.000	-.4130	-.4418	-.4568	-.2143	-.2057	-.2789			
110.000	-.2968	-.3773	-.2035	-.0412	-.1027	-.2347			
120.000						-.0204			
130.000						.0728			
140.000						.0013			
150.000						.0949			
160.000						.3044			
170.000						.1262			
180.000	-.2638	-.3014	.1705	.2809	.3988	.5956			

JAMES 06-030 PRESSURE VENTING - SHUTTLE ORBITER

(REC'D)

MACH (7) = 1.152 ALPHA (1) = 0.564

SECTION (1) FUSELAGE

X/L	.0670	.1250	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
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III

60.000	.2890	.3076	.2337	.0307	-.2015	-.2152	-.1564	.0000	-.1160	-.1686	-.1749	-.1922	-.1773	.0000	-.2281
70.000	.3214	.3264	.2527			-.2156	-.2087	-.1757	-.1547	-.1696	-.1904	-.2332	-.2234	-.2661	-.2285
80.000	.3121	.3406	.2740			-.2706	-.2617	-.2446	-.2317	-.2550	-.2660	-.2744	-.2796	.0000	-.2440
90.000			.2926			-.2600								.0000	
100.000						-.4799								-.1951	
110.000						-.6476								-.1759	
120.000						-.6025								-.1645	
130.000						-.5642								-.1570	
140.000						-.5453								-.1465	
150.000						-.4350	-.3779	-.3129	-.2815	-.2778	-.2499	-.2038	-.1556	-.1266	-.0706

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II

90.000	-.1961	-.1878	-.1652	-.1251	-.1116	-.1134	-.0680	-.0129	.0760	.0709	.0232	-.0187	-.0829	-.1110	.0000
100.000	-.2160	-.2039	-.1676	-.1421	-.1255	-.1370	-.0944	-.0303	.0557	.0444	.0163	-.0201	-.0756	-.0889	-.1626
110.000	-.2168	-.1743	-.1568	-.1620	-.1521	-.1523	-.1023	-.0399	.0171	.0430	.0125	-.0343	-.0791	-.1077	-.1648
120.000						-.1447								.1067	
130.000						-.0874							-.0506		
140.000						-.0839							-.0236		
150.000						-.0561							-.0070		
160.000						-.0475							.0059		
170.000						-.0369							.0228		
180.000	-.0570	-.0356	-.0379	-.0512	-.0492	-.0342	-.0342	-.0258	-.0152	.0024	.0185	.0242	.0272	.0300	.0546

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[illegible]

AMES 68-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC010)

$$\text{MACM} (7) = 1.149 \quad \text{ALPHA} (2) = 8.746$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.2820	.3010	.3190	.3380	.3570	.3940	.4050	.4310
PHI														
60.000	.2793	.3081	.2425											
70.000	.3026	.3275	.2618											
80.000	.2654	.3368	.2797											
90.000			.3028	.0543	-.1931	-.2043	-.1423	.0000	-.1122	-.1621	-.1863	-.1747	.0000	-.2300
100.000					-.2061	-.1920	-.1664	-.1649	-.1480	-.1828	-.2290	-.2304	-.2763	-.2355
110.000					-.2586	-.2451	-.2351	-.2351	-.2254	-.2528	-.2665	-.2643	.0000	-.3142
120.000					-.2849								.0000	
130.000					-.4911								-.2334	
140.000					-.6769								-.2026	
150.000					-.6386								-.1787	
160.000					-.5924								-.1650	
170.000					-.5715								-.1437	
180.000					-.4555	-.3953	-.3304	-.2988	-.2670	-.2435	-.2067	-.1512	-.1250	-.0790
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6680	.7100
PHI														
90.000	-.2109	-.2299	-.2518	-.2082	-.1577	-.1497	-.1253	-.0679	-.0131	.0260	.0016	-.0227	-.0968	.0000
100.000	-.2369	-.2660	-.2490	-.1823	-.1617	-.1680	-.1303	-.1012	-.0340	-.0047	.0006	-.0280	-.0913	-.2023
110.000	-.3244	-.2675	-.1993	-.2030	-.1697	-.1823	-.1589	-.1186	-.0806	-.0203	-.0263	-.0578	-.1393	-.2009
120.000					-.1621								-.1295	
130.000					-.1537								-.0688	
140.000					-.1157								-.0594	
150.000					-.0845								-.0554	
160.000					-.0703								-.0082	
170.000					-.0595								.0090	
180.000	-.0863	-.0852	-.0439	-.0518	-.0488	-.0489	-.0522	-.0426	-.0450	-.0291	-.0039	.0162	.0234	.0233
X/L	.7290	.7470	.7670	.7850	.8030	.8220	.8620	.9000	.9400					
PHI														
60.000							.1340							
70.000							.0705	.2816	.0000					
80.000							.0437	.1991	.2666					
90.000	-.2587	-.1809	-.2206	-.2212	-.1429	.0000	.0026	.1506	.2476					
100.000	-.2582	-.2761	-.2586	-.0873	-.0590	-.1021								
110.000	-.2177	-.2605	-.0320	.0568	.0325	-.0599								
120.000						.1177								
130.000						.2080								
140.000						.0924								
150.000						.1827								
160.000						.3121								
170.000														

TABULATED SOURCE DATA - 1A29/0A63

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD10)

PACH (7) = 1.149 ALPHA (3) = 10.820

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L .0870 .1280 .1840 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

80.000 .2804 .3001 .2465
 90.000 .2689 .3174 .2649
 100.000 .2386 .3237 .2813
 110.000 .3047 .0781 .-1766 .-1914 .-1324 .0000 .-0978 .-1377 .-1446 .-1644 .-11701 .0000 .-2069
 120.000 .-1945 .-1739 .-1546 .-1346 .-11515 .-1774 .-2287 .-2312 .-2729 .-2512
 130.000 .-2433 .-2281 .-2208 .-2138 .-2411 .-2653 .-2906 .-3018 .0000 .-3257
 140.000 .-2891 .-2691 .-5029 .-7019 .-6720 .-6199 .-6010 .-4725 .-4081 .-3417 .-3101 .-2937 .-2440 .-2085 .-1486 .-1277 .-0841
 150.000 .-2357 .-1947 .-1778 .-1534 .-1277 .-0841 .-6880 .7100
 160.000 .-1778 .-1534 .-1277 .-0841 .-6880 .7100
 170.000 .-1534 .-1277 .-0841 .-6880 .7100
 180.000 .-1277 .-0841 .-6880 .7100

X/L

PHI

90.000 .-2124 .-2293 .-2378 .-2405 .-2456 .-2430 .-1835 .-1443 .-1079 .-0314 .-0308 .-1038 .-1068 .-1489 .0000
 100.000 .-2723 .-2906 .-3049 .-2828 .-2645 .-2192 .-2023 .-1716 .-1089 .-0623 .-0226 .-0952 .-0999 .-1236 .-2115
 110.000 .-3443 .-3371 .-3310 .-2868 .-2379 .-2307 .-2154 .-1833 .-1383 .-0813 .-0555 .-1046 .-1064 .-1487 .-2154
 120.000 .-2162 .-2062 .-2847 .-1202 .-1079 .-0974 .-0680 .-0529 .-0642 .-0627 .-0854 .-0541 .-0232 .0082 .0290 .0278 .0178
 130.000 .-2847 .-1202 .-1079 .-0974 .-0680 .-0529 .-0642 .-0627 .-0854 .-0541 .-0232 .0082 .0290 .0278 .0178
 140.000 .-1202 .-1079 .-0974 .-0680 .-0529 .-0642 .-0627 .-0854 .-0541 .-0232 .0082 .0290 .0278 .0178
 150.000 .-1079 .-0974 .-0680 .-0529 .-0642 .-0627 .-0854 .-0541 .-0232 .0082 .0290 .0278 .0178
 160.000 .-0974 .-0680 .-0529 .-0642 .-0627 .-0854 .-0541 .-0232 .0082 .0290 .0278 .0178
 170.000 .-0680 .-0529 .-0642 .-0627 .-0854 .-0541 .-0232 .0082 .0290 .0278 .0178
 180.000 .-0529 .-0642 .-0627 .-0854 .-0541 .-0232 .0082 .0290 .0278 .0178

X/L

PHI

80.000 .0207 .0115 .1888 .0000
 90.000 .0290 .1018 .2298
 100.000 .-0471 .0539 .1981
 110.000 .-1617 .0000 .-1107
 120.000 .-2234 .-1617 .-1107
 130.000 .-2919 .-2979 .-0509 .-0787 .-1107
 140.000 .-2362 .-2833 .-0478 .0558 .0179 .-0788 .1200
 150.000 .-1946 .0886 .1208 .3202 .1524
 160.000 .-2459 .2623 .3115 .4058 .5971

(RECDID)

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

MACH (7) = 1.191 ALPHA (4) = 12.940

DEFENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L .0870 .1260 .1640 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PMI

60.000 .2202 .2631 .2465
70.000 .2076 .2956 .2627
80.000 .1627 .2746 .2770
90.000 .2966 .0693 .1629 .1800 .1264 .0000 .0932 .1036 .1317 .1108 .1682 .0000 .2111
100.000 .1784 .1653 .1451 .1262 .1398 .1692 .1216 .1208 .1692 .1216 .1208 .1692 .1216
110.000 .2289 .2122 .2061 .2382 .2621 .2912 .3073 .0000 .3292
120.000 .2879 .0000
130.000 .5093 .3618
140.000 .7201 .2857
150.000 .7007 .2191
160.000 .6476 .1916
170.000 .6256 .1606
180.000 .4937 .1252 .1419 .1252 .0833

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PMI

90.000 .2095 .2231 .2673 .2506 .2379 .2734 .2489 .2315 .1677 .0508 .0374 .1277 .1445 .1788 .0000
100.000 .2612 .2727 .2933 .2929 .2963 .3130 .2800 .2121 .1546 .0767 .0319 .1148 .1371 .1527 .2431
110.000 .3396 .3377 .3460 .3665 .3436 .3136 .2473 .2285 .1755 .0810 .0640 .1312 .1447 .1758 .2392
120.000 .3427 .1469
130.000 .4072 .1169
140.000 .1432 .1514
150.000 .1303 .1081
160.000 .0958 .0484
170.000 .0718 .0143
180.000 .0879 .0649 .0454 .0566 .0562 .0559 .0686 .0724 .0776 .0690 .0296 .0139 .0281 .0233 .0052

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

60.000 .0612
70.000 .0130 .0164 .0000
80.000 .0390 .1332 .0892
90.000 .0110 .1159 .0378
100.000 .3040 .2344 .3103 .2856 .1776 .0000
110.000 .3039 .3566 .3541 .1104 .0696 .1655
120.000 .2564 .3062 .1044 .0201 .0149 .1040
130.000 .0916
140.000 .1946
150.000 .0908
160.000 .0892
170.000 .3346
180.000 .1497
190.000 .2566 .2575 .2204 .3076 .4236 .6449

DATE 24 MAR 74

(RECD:0)

JAMES 66-637 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACH} (7) = 1.150 \quad \text{ALPHA} (5) = 15.020$$

SECTION (1) FUSELAGE	DEPENDENT VARIABLE CP
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

[illegible]

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(REC010)

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

MACH (P) = 1.151 ALPHA (6) = 17.130

SECTION 111 FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
60.000	.1818	.2156	.2263												
70.000	.0434	.2139	.2396												
80.000	.0400	.1911	.2517												
90.000			.2663	.1214	-.1372	-.1536	-.1153	.0000	-.0817	-.1020	-.1216	-.1401	-.1519	.0000	-.2248
100.000					-.1557	-.1334	-.1075	-.1085	-.1307	-.1382	-.1878	-.2037	-.2330	-.2405	
110.000					-.2169	-.1969	-.1965	-.1843	-.2222	-.2338	-.2806	-.3017	.0000	-.3295	
120.000					-.2844										
130.000					-.5139										
140.000					-.7455										
150.000					-.7415										
160.000					-.7012										
170.000					-.6660										
180.000					-.5232	-.4442	-.3792	-.3497	-.3169	-.2446	-.1868	-.1338	-.1167	-.0831	

X/L	.4500	.4800	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.2101	-.2291	-.2823	-.2468	-.2174	-.2426	-.2438	-.1742	-.0524	-.0350	-.0323	-.1439	-.2337	-.2615	.0000
100.000	-.2832	-.5030	-.3144	-.2975	-.2941	-.2953	-.2889	-.1922	-.1156	-.0371	-.0358	-.1198	-.1953	-.1891	-.3022
110.000	-.3440	-.3476	-.3585	-.3634	-.3768	-.3782	-.3416	-.1967	-.0771	-.0901	-.0828	-.1002	-.1368	-.1560	-.2116
120.000						-.1885								-.0834	
130.000						-.3159								-.0428	
140.000						-.4581								-.0667	
150.000						-.1175								-.1335	
160.000						-.0938								-.0550	
170.000						-.0669								-.0237	
180.000	-.0865	-.0711	-.0352	-.0651	-.0780	-.0836	-.0791	.0131	.0730	.0807	.1196	.1077	.0938	.0823	.0368

.9400

.8290

.8030

.7850

.7670

.7470

PHI

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
60.000															
70.000															
80.000															
90.000	-.3913	-.3519	-.3538	-.2803	-.2449	.0000									
100.000	-.3893	-.4232	-.3901	-.0840	-.1088	-.1665									
110.000	-.2843	-.2853	-.0158	.0289	-.0126	-.1272									
120.000						.0630									
130.000						.1517									
140.000						.0747									
150.000						.1085									
160.000						.3649									
170.000						.1740									
180.000	-.2875	-.1163	.2313	.3285	.4624	.6742									

-.2066

-.2921

-.2580

.0000

-.1181

-.3425

.0164

.1768

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A23/0A63

(RECD10)

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

MACH (0) = 1.250 ALPHA (1) = 6.539

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	0.075	.1280	.1640	.2030	.2420	.2840	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI													
60.000	.2230	.2411	.2533										
70.000	.2484	.2621	.2654										
80.000	.2203	.2392	.2325										
90.000		.3710	.0781	-.1502	-.1795	-.1403	.0000	-.0856	-.1256	-.1272	-.1406	-.1350	-.1842
100.000					-.1836	-.1820	-.1401	-.1279	-.1317	-.1446	-.1748	-.2169	-.1925
110.000					-.2218	-.2196	-.2219	-.1955	-.2118	-.2156	-.2228	.0000	-.2292
120.000					-.2201							.0000	
130.000					-.4033							-.2153	
140.000					-.5546							-.1929	
150.000					-.5178							-.1819	
160.000					-.4764							-.1819	
170.000					-.4673							-.1909	
180.000					-.4087	-.3454	-.3014	-.2866	-.2804	-.2408	-.2349	-.1940	-.1168
X/L	.4500	.4680	.4880	.5090	.5240	.5460	.5810	.5980	.6170	.6360	.6540	.6730	.6880
PMI													
90.000	-.1854	-.1707	-.1807	-.1625	-.1511	-.1533	-.1288	-.1120	-.0719	-.0409	-.0292	-.0655	-.0745
100.000	-.1942	-.2092	-.1907	-.1875	-.1515	-.1631	-.1557	-.1360	-.0846	-.0755	-.0305	-.0778	-.0573
110.000	-.2703	-.2053	-.1830	-.1803	-.1721	-.1819	-.1661	-.1424	-.1158	-.0772	-.0498	-.0537	-.0694
120.000					-.1734							-.0940	
130.000					-.1356							-.0560	
140.000					-.1135							-.0458	
150.000					-.0768							-.0445	
160.000					-.0659							-.0299	
170.000					-.0353							-.0172	
180.000	-.0931	-.0737	-.0545	-.0566	-.0526	-.0521	-.0338	-.0574	-.0385	-.0558	-.0399	-.0254	-.0138
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400				
PMI													
60.000							.0703						
70.000							.0457	.2110	.0000				
80.000							-.0341	.1052	.2437				
90.000							-.0934	.0197	.2210				
100.000	-.1728	.0221	-.0984	-.2373	-.1230	.0000							
110.000	-.1768	-.1774	-.1866	-.0787	-.0196	-.0482							
120.000	-.1430	-.1982	-.1230	.0856	.0900	-.0018							
130.000					.1492								
140.000					.2441								
150.000					.0923								
160.000					.1927								
170.000					.2599								
180.000					.1324								
190.000	-.1415	-.1896	.1916	.2424	.2911	.4164							

AMES 64-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (0) = 1.249 ALPHA (2) = 0.616

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	0.070	.1200	.1640	.2030	.2420	.2840	.3010	.3190	.3360	.3570	.3730	.3940	.4097	.4310
PHI														
60.000	.2069	.2236	.2265											
70.000	.2217	.2351	.2378											
80.000	.1864	.2360	.2906											
90.000		.3252	.0968	-.1397	-.1636	-.1164	.0000	-.0763	-.1233	-.1236	-.1422	-.1376	.0000	-.1893
100.000					-.1604	-.1590	-.1284	-.1066	-.1229	-.1386	-.1612	-.1852	-.2230	-.2067
110.000					-.2046	-.1941	-.1897	-.1787	-.2011	-.2159	-.2351	-.2493	.0000	-.2626
120.000					-.2172								.0000	
130.000					-.4099								-.2643	
140.000					-.5777								-.2211	
150.000					-.5456								-.1975	
160.000					-.5006								-.1912	
170.000					-.4948								-.1829	
180.000					-.4287	-.3611	-.3188	-.2610	-.2736	-.2480	-.2242	-.1887	-.1601	-.1037

X/L	.4500	.4680	.4680	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.0 0	-.1737	-.1877	-.2106	-.2004	-.2056	-.2161	-.1740	-.1156	-.0680	-.0595	-.0714	-.1242	-.1155	.0000
100.0 3	-.2136	-.2426	-.2415	-.2321	-.2227	-.2146	-.1825	-.1704	-.1179	-.1207	-.0567	-.1121	-.0890	-.1670
110.0 7	-.2736	-.2732	-.2709	-.2628	-.2307	-.2211	-.1950	-.1757	-.1517	-.1162	-.0807	-.0739	-.1115	-.1741
120.000					-.1923								-.1251	
130.000					-.1629								-.0968	
140.000					-.1145								-.1240	
150.000					-.0925								-.0712	
160.000					-.0752								-.0536	
170.000					-.0646								-.0440	
180.000	-.0663	-.0762	-.0577	-.0632	-.0580	-.0370	-.0642	-.0655	-.0717	-.0729	-.0625	-.0540	-.0338	-.0272

X/L	.7280	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
60.000									
70.000									
80.000									
90.000	-.2106	-.1146	-.2139	-.2659	-.1766	.0700			
100.000	-.2063	-.2361	-.2545	-.1271	-.0715	-.0864			
110.000	-.1811	-.2746	-.1660	.0234	.0326	-.0246			
120.000					.1406				
130.000					.2292				
140.000					.0959				
150.000					.1625				
160.000					.2957				
170.000					.1553				
180.000	-.1631	-.2216	.1626	.2570	.3320	.3074			

$\lambda_{\text{max}} (0) = 1.248 \quad \lambda_{\text{max}} (3) = 10.750$

DEPENDENT VARIABLE OF

SECTION (117) PAGE

Y/L	.0670	.1200	.1640	.2030	.2420	.2840	.3280	.3750	.3843	.4095	.4310
PHI											
60.000	.1936	.2116	.1994								
70.000	.1877	.2122	.2280								
80.000	.1441	.1981	.2634								
90.000			.3253	.1126	-.1214	-.1462	-.1028	.0000	-.0747	-.1222	-.1254
100.000						-.1479	-.1402	-.1151	-.1021	-.1208	-.1419
110.000						-.1827	-.1774	-.1783	-.1694	-.2011	-.2206
120.000						-.2125					-.2393
130.000						-.4064					-.2560
140.000						-.5965					-.2690
150.000						-.5722					-.2847
160.000						-.5230					-.2924
170.000						-.5159					-.3128
180.000						-.4366	-.3724	-.3216	-.2897	-.2606	-.2400
Y/L	.4500	.4680	.4860	.5030	.5240	.5460	.5610	.5800	.6170	.6360	.6540
PHI											
90.000	-.1747	-.1895	-.2158	-.2064	-.2147	-.2323	-.2162	-.2103	-.1787	-.1192	-.0747
100.000	-.2216	-.2423	-.2419	-.2429	-.2471	-.2640	-.2578	-.2311	-.1453	-.1362	-.1071
110.000	-.2687	-.2898	-.2940	-.3078	-.3036	-.3101	-.2557	-.2132	-.1810	-.1364	-.1061
120.000						-.2565					-.1229
130.000						-.2485					-.1364
140.000						-.1175					-.1834
150.000						-.1177					-.1017
160.000						-.0931					-.0841
170.000						-.0762					-.0637
180.000	-.0873	-.0631	-.0593	-.0689	-.0654	-.0643	-.0734	-.0781	-.0851	-.0829	-.0630
Y/L	.7290	.7470	.7670	.7840	.8030	.8290	.8620	.9000	.9400		
PHI											
60.000							-.1115				
70.000							-.1261	.0791	.0000		
80.000							-.1506	-.0106	.1729		
90.000	-.2491	-.1832	-.2654	-.3267	-.2111	.0000	-.1504	-.1056	.1444		
100.000	-.2481	-.2739	-.2991	-.1927	-.0869	-.1239					
110.000	-.2162	-.2677	-.2359	-.0063	-.0706	-.0748					
120.000						.1320					
130.000						.2029					
140.000						.0934					
150.000						.1119					
160.000						.3024					
170.000						.1456					
180.000	-.2156	-.2467	.1421	.2844	.3835	.5940					

AMES 86-830 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACN (8) = 1.250 ALPHA (4) = 12.870

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
PMI															
60.000	.1890	.2041	.1774												
70.000	.1460	.2001	.2052												
80.000	.1029	.1663	.2354												
90.000		.1384	.1366	.1149	.1135	.0949	.0000	-.0712	-.1036	-.1006	-.1160	-.1274	.0000	.0000	-.1652
100.000				.1381	.1300	-.1133	-.0962	-.1190	-.1317	-.1799	-.1804	-.2061	-.2000		-.2000
110.000				.1690	-.1676	-.1702	-.1632	-.1937	-.2154	-.2378	-.2522	.0000	.0000	-.2787	
120.000				.2127											
130.000				.4076											
140.000				.6052											
150.000				.5904											
160.000				.5461											
170.000				.5323											
180.000				.4389	-.3758	-.3240	-.2932	-.2801	-.2446	-.2119	-.1681	-.1487	-.1092		

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PMI

90.000	-.1681	-.1801	-.2097	-.2043	-.2168	-.2343	-.2091	-.2055	-.1815	-.1784	-.1500	-.1804	-.2214	-.2052	.0000
100.000	-.2120	-.2250	-.2308	-.2402	-.2471	-.2735	-.2573	-.2492	-.1979	-.2163	-.1282	-.1501	-.1976	-.1759	-.2304
110.000	-.2886	-.2867	-.2915	-.3055	-.3069	-.3230	-.2987	-.2683	-.2276	-.1796	-.1655	-.1647	-.1832	-.2010	-.2253
120.000						-.3574								-.1779	
130.000						-.4611								-.1583	
140.000						-.1476								-.2148	
150.000						-.1491								-.1483	
160.000						-.0987								-.0981	
170.000						-.0824								-.0770	
180.000	-.0958	-.0906	-.0652	-.0787	-.0708	-.0584	-.0771	-.0777	-.0813	-.0837	-.0719	-.0662	-.0622	-.0592	-.0560

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI

60.000									
70.000									
80.000									
90.000	-.2871	-.1366	-.3033	-.3676	-.2210	.0000	-.2053	-.1365	-.0689
100.000	-.2875	-.2963	-.3407	-.2289	-.1223	.1261			
110.000	-.2901	-.2900	-.2516	-.0385	-.0406	-.0812			
120.000						.1122			
130.000						.1555			
140.000						.0772			
150.000						.0644			
160.000						.3055			
170.000						.1599			
180.000	-.2345	-.2876	.0881	.2973	.4060	.6528			

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(RECD10)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (S) = 1.250 ALPHA (S) = 14.920

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
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PHI															
60.000	.1775	.1927	.1481												
70.000	.1162	.1785	.1555												
80.000	.0732	.1293	.1830												
90.000		.2286	.1354	.1049											
100.000					.1273	-.0933	.0730	-.0677	-.0732	-.0941	-.1114	-.1203	.0000	-.1656	
110.000					-.1263	-.1191	-.1072	-.0882	-.1030	-.1273	-.1550	-.1700	-.1940	-.1986	
120.000					-.1641	-.1575	-.1611	-.1556	-.1877	-.2112	-.2315	-.2541	.0000	-.2785	
130.000					-.2147								-.0000		
140.000					-.4113								-.4564		
150.000					-.6164								-.3802		
160.000					-.6113								-.2677		
170.000					-.5726								-.2263		
180.000					-.5502								-.1950		
190.000					-.4492	-.3835	-.3323	-.3042	-.2915	-.2543	-.2173	-.1737	-.1526	-.1145	
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100

PHI															
90.000	-.1695	-.1788	-.1794	-.2043	-.2099	-.2243	-.1994	-.2016	-.1699	-.1945	-.1533	-.1845	-.2551	-.2439	.0000
100.000	-.2156	-.2316	-.2410	-.2426	-.2497	-.2395	-.2444	-.2508	-.2100	-.2400	-.1639	-.1813	-.2087	-.2072	-.2583
110.000	-.2842	-.2915	-.2975	-.2785	-.3146	-.3192	-.2840	-.2926	-.2421	-.2374	-.1949	-.1830	-.1891	-.2248	-.2339
120.000						-.3692								-.1785	
130.000						-.3729								-.1721	
140.000						-.3234								-.2309	
150.000						-.1281								-.2161	
160.000						-.0899								-.1042	
170.000						-.0903								-.0750	
180.000	-.1008	-.0933	-.0870	-.0455	-.0795	-.0744	-.0852	-.0574	-.0916	-.0986	-.0648	-.0739	-.0561	-.0692	-.0562
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						

PHI															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															
190.000															
X/L	.9600	.9800	1.0000	1.0200	1.0400	1.0600	1.0800	1.1000	1.1200	1.1400	1.1600	1.1800	1.2000	1.2200	1.2400

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FABULATED SOURCE DATA - 1A29/OA63

(RECD10)

WAFS 64-630 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACH} (0) = 1.251 \quad \text{ALPHA} (0) = 17.100$$

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

0.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
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PHI

[illegible]

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X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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FBI

Year	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415
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.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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FBI

60.000	-3705	-0980	-3481	-4710	-3568	.0700	-3258
60.000	-3701	-3566	-4259	-2784	-2183	-2430	-3899
60.000	-3062	-3468	-2416	-0979	-1060	-1853	-4340
60.000						.0397	-3260
60.000						.0540	-2433
60.000						-10025	-2174
60.000						.0418	-2787
60.000						.2944	-1851
60.000						.1720	-2028
60.000	-2754	-3091	-0870	.2672	.4071	.7191	

60.000	- .2734	- .3091	-.0870	.2672	.4071	.7191
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DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0A63

PAGE 1377

AMES 60-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD10)

MACH (9) = 1.399 ALPHA (1) = 6.406

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0870	.1260	.1640	.2030	.2420	.2810	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI														
60.000	.2236	.2163	.1599											
70.000	.2366	.2296	.1870											
80.000	.2154	.2309	.2206											
90.000			.3140	.1483	-.0743	-.1145	-.0995	.0000	-.0660	-.1003	-.0975	-.1085	-.1027	.0000
100.000						-.1131	-.1253	-.1113	-.0950	-.1048	-.1129	-.1403	-.1405	-.1703
110.000						-.1429	-.1479	-.1634	-.1528	-.1667	-.1716	-.1787	-.1839	.0000
120.000						-.1352								.0000
130.000						-.2993								-.2216
140.000						-.4343								-.1902
150.000						-.4053								-.1705
160.000						-.3674								-.1714
170.000						-.3674								-.1777
180.000						-.3491	-.2842	-.2593	-.2315	-.2179	-.2039	-.2037	-.1861	-.1835
190.000														-.1524
200.000														
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880
PMI														
90.000	-.1233	-.1286	-.1432	-.1304	-.1303	-.1369	-.1244	-.1153	-.0970	-.0798	-.0480	-.0731	-.0905	-.1215
100.000	-.1514	-.1690	-.1364	-.1447	-.1393	-.1512	-.1401	-.1298	-.1036	-.1083	-.0626	-.0733	-.0824	-.0996
110.000	-.1697	-.1775	-.1660	-.1708	-.1597	-.1691	-.1512	-.1397	-.1335	-.1176	-.1016	-.0945	-.0888	-.1058
120.000						-.1738								-.1072
130.000						-.1521								-.0775
140.000						-.1255								-.0697
150.000						-.0948								-.0666
160.000						-.0830								-.0589
170.000						-.0718								-.0513
180.000	-.1266	-.1103	-.0793	-.0830	-.0734	-.0682	-.0689	-.0632	-.0654	-.0632	-.0602	-.0573	-.0536	-.0491
190.000														-.0366
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PMI														
60.000							-.0424							
70.000							-.0909	.1317	.0000					
80.000							-.1021	-.0176	.1836					
90.000	-.1416	-.0199	.0053	-.1987	-.1265	.0000	-.0843	-.1331	.1326					
100.000	-.1470	-.1441	-.1459	-.1256	.0016	-.0158								
110.000	-.1185	-.1474	-.1369	.0547	.1057	.0471								
120.000						.2200								
130.000						.2852								
140.000						.0914								
150.000						.1715								
160.000						.2273								
170.000						.1019								
180.000	-.1156	-.1314	.1561	.2026	.2390	.3315								

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER (RECD10)

MACH (3) = 1.400 ALPHA (2) = 0.512

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0875	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
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PHI															
60.000	.2145	.2087	.1556												
70.000	.2075	.2172	.1750												
80.000	.1809	.2069	.1918												
90.000		.2510	.1673	-.0702	-.1083	-.0813	.0000	-.0520	-.0901	-.0864	-.1003	-.0939	.0000	-.1388	
100.000					-.1085	-.1118	-.0956	-.0791	-.0901	-.1023	-.1344	-.1351	-.1666	-.1545	
110.000					-.1310	-.1375	-.1481	-.1358	-.1530	-.1666	-.1811	-.1898	.0000	-.2005	
120.000					-.1356								.0000		
130.000					-.3049								-.2691		
140.000					-.4540								-.2157		
150.000					-.4304								-.1840		
160.000					-.3908								-.1801		
170.000					-.3913								-.1811		
180.000					-.3684								-.1794	-.1403	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PHI															
90.000	-.1197	-.1304	-.1469	-.1421	-.1521	-.1636	-.1559	-.1541	-.1406	-.1170	-.0843	-.1079	-.1210	-.1567	.0000
100.000	-.1571	-.1791	-.1747	-.1715	-.1732	-.1938	-.1882	-.1745	-.1420	-.1501	-.0962	-.1058	-.1161	-.1307	-.1566
110.000	-.2090	-.2080	-.2077	-.2197	-.2184	-.2234	-.2010	-.1873	-.1681	-.1533	-.1349	-.1281	-.1159	-.1400	-.1639
120.000						-.2221								-.1250	
130.000						-.1840								-.1139	
140.000						-.1349								-.1250	
150.000						-.1022								-.0779	
160.000						-.0871								-.0719	
170.000						-.0747								-.0633	
180.000	-.1139	-.1044	-.0765	-.0811	-.0731	-.0665	-.0690	-.0687	-.0731	-.0685	-.0675	-.0657	-.0619	-.0557	-.0345

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
60.000							-.0744		
70.000							-.1215	.0306	.0000
80.000							-.1351	-.1056	.1349
90.000	-.1853	-.0810	-.1670	-.2404	-.1954	.0000	-.1156	-.1451	.0771
100.000	-.1853	-.1769	-.2087	-.1858	-.0816	-.0586			
110.000	-.1959	-.1817	-.1602	-.0670	.0319	.0139			
120.000						.2038			
130.000						.2565			
140.000						.0970			
150.000						.1246			
160.000						.2678			
170.000						.1369			
180.000	-.1476	-.1875	.1010	.2177	.2892	.4416			



TABULATED SOURCE DATA - 1A29/OA63

DATE 24 MAR 74

AMES 66-63D PRESSURE VENTING - SHUTTLE ORBITER (RECO10)

MACH (9) = 1.399 ALPHA (3) = 10.640		DEPENDENT VARIABLE CP											
SECTION (1) FUSELAGE													
X/L		.0870	.1260	.1640	.2030	.2420	.2810	.3200	.3590	.3980	.4370	.4760	.5150
PHI													
60.000	.2165	.2090	.1577										
70.000	.1861	.2095	.1636										
80.000	.1572	.1952	.1749										
90.000		.2114	.1679	-.0628	-.0996	-.0721	.0000	-.0411	-.0809	-.0761	-.0895	-.0851	.0000
100.000					-.0996	-.1023	-.0815	-.0664	-.0763	-.0919	-.1265	-.1294	-.1637
110.000					-.1228	-.1278	-.1333	-.1208	-.1424	-.1587	-.1737	-.1889	-.2070
120.000					-.1375								.0000
130.000					-.3051								-.3256
140.000					-.4696								-.2517
150.000					-.4533								-.2031
160.000					-.4141								-.1944
170.000					-.4089								-.1902
180.000					-.3800	-.3142	-.2781	-.2468	-.2375	-.2228	-.2135	-.1861	-.1381
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880
PHI													
90.000	-.1174	-.1252	-.1422	-.1446	-.1537	-.1730	-.1598	-.1593	-.1567	-.1502	-.1273	-.1602	-.1839
100.000	-.1600	-.1669	-.1700	-.1719	-.1789	-.2013	-.1950	-.1980	-.1808	-.1983	-.1580	-.1521	-.1505
110.000	-.2182	-.2176	-.2204	-.2271	-.2293	-.2456	-.2379	-.2390	-.2312	-.2126	-.1797	-.1582	-.1492
120.000						-.3233							-.1616
130.000						-.2547							-.1412
140.000						-.1284							-.1368
150.000						-.1169							-.0813
160.000						-.0945							-.0881
170.000						-.0790							-.0719
180.000	-.1137	-.1029	-.0746	-.0799	-.0753	-.0689	-.0730	-.0733	-.0784	-.0815	-.0686	-.0722	-.0657
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400				-.0622
PHI													
60.000													
70.000													
80.000													
90.000	-.2100	-.0827	-.2075	-.2867	-.2444	.0000							
100.000	-.2123	-.2107	-.2490	-.2582	-.1025	-.1048							
110.000	-.1846	-.2171	-.2180	-.0452	-.0067	-.0325							
120.000						.1530							
130.000						.2025							
140.000						.0954							
150.000						.0928							
160.000						.2655							
170.000						.1289							
180.000	-.1846	-.2011	-.0176	.2259	.3359	.5456							

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD19)

$$\text{MACH} (9) = 1.400 \quad \text{ALPHA} (4) = 12.750$$

SECTION (1) FUSELAGE

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PFI															
90.000	.2104	.1944	.1497												
70.000	.1586	.1855	.1490												
60.000	.1136	.1612	.1530												
90.000		.1669	.1436	-.0490		-.0660	-.0607	.0000	-.0316	-.0607	-.0536	-.0637	-.0801	.0000	-.1108
100.000					-.0902	-.0682	-.0699	-.0525	-.0638	-.0789	-.1183	-.1225	-.1544	-.1422	
110.000					-.1132	-.1128	-.1181	-.1065	-.1311	-.1494	-.1685	-.1859	.0000	-.2079	
120.000					-.1377								.0000		
130.000					-.3021								-.4235		
140.000					-.4789								-.3075		
150.000					-.4699								-.2254		
160.000					-.4333								-.2081		
170.000					-.4238								-.1953		
180.000					-.3882	-.3237	-.2855	-.2571	-.2471	-.2298	-.2165	-.1863	-.1722	-.1283	
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PFI															
90.000	-.1112	-.1268	-.1500	-.1452	-.1526	-.1704	-.1638	-.1632	-.1603	-.1556	-.1561	-.1456	-.1951	-.2221	.0000
100.000	-.1516	-.1707	-.1815	-.1774	-.1806	-.2034	-.1983	-.2025	-.1879	-.2019	-.1679	-.1768	-.1909	-.2113	-.2160
110.000	-.2187	-.2158	-.2202	-.2313	-.2323	-.2566	-.2475	-.2486	-.2450	-.2349	-.2252	-.2064	-.1854	-.2139	-.1977
120.000					-.3624									-.1701	
130.000					-.4811									-.1755	
140.000					-.1353									-.2332	
150.000					-.1450									-.1460	
160.000					-.1021									-.1003	
170.000					-.0842									-.0770	
180.000	-.1079	-.1101	-.0756	-.0832	-.0771	-.0696	-.0736	-.0729	-.0809	-.0875	-.0782	-.0804	-.0715	-.0700	-.0738
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PFI															
60.000							- .2170								
70.000							-.2257	-.1726	.0000						
80.000							-.2083	-.2283	-.0671						
90.000	-.2516	-.0936	-.1710	-.3165	-.2836	.0000		-.1849	-.2130	-.1709					
100.000	-.2483	-.2365	-.2801	-.2768	-.1447	-.1370									
110.000	-.2104	-.2365	-.2360	-.0762	-.0415	-.0795									
120.000						.1110									
130.000						.1307									
140.000						.0599									
150.000															

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0A63

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD)

MACH (9) = 1.400 ALPHA (5) = 14.840

SECTION (1) FUSELAGE DEPENDENT VARIABLE CF

X/L	.0670	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI															
80.000	.1975	.1877	.1394												
90.000	.1278	.1878	.1364												
100.000	.0787	.1303	.1348												
110.000		.1270	.1215	-.0367	-.0747	-.0567	.0000	-.0296	-.0360	-.0446	-.0578	-.0701	.0000	-.1142	
120.000					-.0765	-.0796	-.0640	-.0439	-.0567	-.0713	-.0984	-.1088	-.1316	-.1370	
130.000					-.1031	-.1036	-.1091	-.1019	-.1274	-.1450	-.1649	-.1809	.0000	-.2035	
140.000					-.1368								.0000		
150.000					-.2995								-.4814		
160.000					-.4834								-.3632		
170.000					-.4832								-.2535		
180.000					-.4523								-.2205		
190.000					-.4378								-.1970		
200.000					-.3951	-.3318	-.2907	-.2640	-.2541	-.2318	-.2152	-.1794	-.1596	-.1223	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1101	-.1234	-.1432	-.1384	-.1515	-.1690	-.1609	-.1590	-.1536	-.1516	-.1300	-.1440	-.1906	-.2349	.0000
100.000	-.1483	-.1791	-.1791	-.1749	-.1797	-.2029	-.1970	-.1977	-.1813	-.1965	-.1625	-.1674	-.1867	-.2152	-.2263
110.000	-.2108	-.2138	-.2166	-.2323	-.2351	-.2601	-.2486	-.2468	-.2415	-.2300	-.2270	-.2108	-.1949	-.2245	-.2409
120.000						-.3803								-.1953	
130.000						-.3875								-.1944	
140.000						-.3331								-.2539	
150.000						-.1621								-.2418	
160.000						-.0957								-.1274	
170.000						-.0908								-.1001	
180.000	-.1073	-.1008	-.0743	-.0837	-.0741	-.0696	-.0758	-.0839	-.0904	-.0968	-.0913	-.0900	-.0884	-.0818	-.0849

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PHI									
80.000							-.2849		
90.000							-.3527	-.2725	.0000
100.000							-.2939	-.2907	-.1528
110.000							-.2303	-.2471	-.2091
120.000									
130.000									
140.000									
150.000									
160.000									
170.000									
180.000	-.2338	-.2366	-.0800	.1712	.3472	.6474			

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OA83

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC010)

MACH (9) = 1.399 ALPHA (6) = 16.920

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0070 .1280 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

80.000 .1781 .1895 .1271
 75.000 .0909 .1474 .1287
 80.000 .0356 .0649 .1070
 90.000 .0891 .0933 .0363 .0687 .0604 .0090 .0377 .0393 .0373 .0672 .0000 .1228
 100.000 .0685 .0825 .0565 .0430 .0556 .0717 .0855 .1037 .1137 .1339
 110.000 .1169 .1080 .1056 .0933 .1206 .1466 .1597 .1732 .0000 .1971
 120.000 .1418
 130.000 .3107
 140.000 .4926
 150.000 .5045
 160.000 .4772
 170.000 .4561
 180.000 .4032 .3403 .2879 .2627 .2603 .2356 .2141 .1800 .1630 .1287

X/L

PHI

90.000 .1048 .1166 .1323 .1231 .1403 .1636 .1475 .1506 .1506 .1540 .1408 .1461 .1916 .2352 .0000
 100.000 .1385 .1746 .1634 .1727 .1966 .1829 .1911 .1725 .1942 .1603 .1610 .1858 .2092 .2263
 110.000 .2049 .2080 .2131 .2266 .2296 .2562 .2403 .2383 .2391 .2257 .2250 .2143 .2051 .2338 .2580
 120.000 .3500
 130.000 .4248
 140.000 .5078
 150.000 .2673
 160.000 .1356
 170.000 .1009
 180.000 .1088 .0858 .0858 .0783 .0889 .1082 .1150 .1123 .1014 .1021 .1074 .1127

X/L

PHI

80.000 .3095
 70.000 .4032 .3481 .0000
 80.000 .4135 .3748 .2823
 90.000 .3056 .1209 .2452 .4180 .3505 .0000
 100.000 .3041 .2990 .3480 .2970 .2189 .2415
 110.000 .2731 .2970 .2328 .1122 .1135 .1775
 120.000 .0179
 130.000 .0305
 140.000 .0205
 150.000 .0273
 160.000 .2954
 170.000 .1473
 180.000 .2586 .2586 .1055 .0795 .3241 .7011

DATE 24 MAR 74

AMF'S 6A-630 PRESSURE VENTING - SHUTTLE ORBITER
TABULATED SOURCE DATA - 1A29/0A63

(REG-15)

AMF'S 86-030 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{ALPHA} (1) = 1.300 \quad \text{ALPHA} (1) = 6.359$$

DEPENDENT VARIABLE CF

SECTION (1) FUSELAGE

[illegible]

TABULATED SOURCE DATA - 1A29/OA83

DATE 24 MAR 74

AMES 86-830 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (10) = 1.500 ALPHA (2) = 0.426

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	0.070	.1200	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI														
60.000	.2264	.2044	.1485											
70.000	.2708	.2055	.1605											
80.000	.1877	.2033	.1711											
90.000		.1947	.1749	-.0343	-.0741	-.0536	.0000	-.0245	-.0572	-.0548	-.0654	-.0609	.0000	-.1075
100.000				.0727	-.0779	-.0652	-.0505	-.0601	-.0699	-.0974	-.0977	-.1271	-.1152	
110.000				-.0908	-.0994	-.1132	-.1045	-.1203	-.1309	-.1389	-.1472	.0000	.0000	-.1581
120.000				-.0894										.0000
130.000				-.2480										-.2363
140.000				-.3664										-.1978
150.000				-.5671										-.1664
160.000				-.3324										-.1625
170.000				-.3324										-.1621
180.000				-.3251	-.2643	-.2358	-.2081	-.1958	-.1805	-.1818	-.1722	-.1656	-.1378	
X/L	.4500	.4880	.4880	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.730	.6880	.7100

PMI														
90.000	-.0853	-.0954	-.1081	-.1053	-.1171	-.1326	-.1246	-.1235	-.1190	-.1101	-.0807	-.0951	-.1099	.0000
100.000	-.1179	-.1399	-.1375	-.1335	-.1368	-.1565	-.1523	-.1519	-.1335	-.1414	-.0965	-.0920	-.1045	-.1448
110.000	-.1657	-.1662	-.1670	-.1773	-.1771	-.1933	-.1815	-.1684	-.1577	-.1461	-.1329	-.1164	-.1101	-.1534
120.000						-.2111								-.1273
130.000						-.1608								-.1085
140.000						-.1208								-.1068
150.000						-.0905								-.0733
160.000						-.0746								-.0657
170.000						-.0610								-.0588
180.000	-.1147	-.0993	-.0875	-.0713	-.0608	-.0548	-.0541	-.0550	-.0546	-.0564	-.0530	-.0537	-.0512	-.0521
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					

PMI														
60.000														
70.000														
80.000														
90.000	-.1329	-.0854	-.1003	-.2141	-.1972	.0000	-.0991	-.1502	-.0120					
100.000	-.1522	-.1558	-.1761	-.1904	-.0874	-.0406								
110.000	-.1344	-.1376	-.1542	-.0166	.0313	.0421								
120.000						.2274								
130.000						.2669								
140.000						.0999								
150.000						.1239								
160.000						.2464								
170.000						.1178								
180.000	-.1322	-.1506	.0528	-.1689	.2600	.4008								

DATE 24 MAY 74

(RECD10)

JAMES 00-030 PRESSURE VENTING - SHUTTLE ORBITER

$\text{MACM}(10) = 1.499 \quad \text{ALPMA}(5) = 14.785$

DEPENDENT VARIABLE CP

K/L	.0800	.1200	.1600	.2000	.2400	.2600	.2800	.3000	.3100	.3190	.3300	.3370	.3750	.3940	.4050	.4310
PMI																
60,000	.2035	.1954	.1466													
70,000	.1376	.1769	.1445													
80,000	.0695	.1400	.1416													
90,000			.1345	.1160	-.0098	-.0449	-.0344	.0000	-.0133	-.0115	-.0187	-.0276	-.0355	.0000	-.0776	
100,000						-.1471	-.0515	-.0589	-.0264	-.0407	-.0407	-.0509	-.0719	-.0692	-.0971	
110,000						-.1662	-.0709	-.0756	-.0667	-.0693	-.1071	-.1230	-.1379	.0000	-.1590	
120,000						-.0947								.0000		
130,000						-.2459								-.4241		
140,000						-.4172								-.3362		
150,000						-.4208								-.2358		
160,000						-.3923								-.2020		
170,000						-.3794								-.1829		
180,000						-.3577	-.2958	-.2662	-.2360	-.2224	-.2045	-.1945	-.1702	-.1570	-.1108	
K/L	.4500	.4600	.4680	.5050	.5200	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6750	.6880	.7100	
PMI																
90,000	-.0724	-.0692	-.1030	-.1014	-.1126	-.1334	-.1268	-.1278	-.1282	-.1181	-.1027	-.1148	-.1434	-.1687	.0000	
100,000	-.1079	-.1341	-.1382	-.1347	-.1456	-.1617	-.1595	-.1641	-.1519	-.1617	-.1317	-.1311	-.1431	-.1701	-.2004	
110,000	-.1670	-.1707	-.1727	-.1667	-.1500	-.2134	-.2059	-.2008	-.2034	-.2003	-.1945	-.1865	-.1769	-.1976	-.2347	
120,000						-.3409								-.1963		
130,000						-.3595								-.2021		
140,000						-.3477								-.2492		
150,000						-.1718								-.2246		
160,000						-.0936								-.1260		
170,000						-.1079								-.1007		
180,000	-.0966	-.0909	-.0875	-.0765	-.0668	-.1617	-.0670	-.0744	-.0849	-.0938	-.0891	-.0990	-.0675	-.0871	-.0894	
K/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400							
PMI																
60,000																
70,000																
80,000																
90,000	-.2355	-.1070	-.1076	-.3184	-.3035	.0000										
100,000	-.2371	-.2264	-.2660	-.2779	-.1660	-.1995										
110,000	-.2195	-.2441	-.2239	-.0661	-.0727	-.1185										
120,000						.0796										
130,000						.0653										
140,000						.0000										
150,000						-.0396										
160,000						-.2567										
170,000						-.1577										
180,000	-.2245	-.2437	-.0824	.0115	.3042	.6178										

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER (RECD10)

MACH (10) = 1.499 ALPHA (6) = 16.680

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2810	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI														
80.000	.2010	.1866	.1463											
90.000	.1180	.1645	.1341											
80.000	.0611	.1037	.1213											
90.000		.1035	.0845	-.0265	-.1474	-.0350	.0000	-.0189	-.0176	-.0203	-.0263	-.0342	.0000	-.0820
100.000				-.0501	-.0448	-.0279	-.0228	-.0287	-.0374	-.0524	-.0656	-.0656	-.0838	-.0934
110.000				-.0697	-.0677	-.0733	-.0615	-.0822	-.1015	-.1164	-.1292	.0000	.0000	-.1529
120.000				-.0961									.0000	.0000
130.000				-.2462									-.4517	
140.000				-.4210									-.3779	
150.000				-.4336									-.2851	
160.000				-.4112									-.2195	
170.000				-.3909									-.1892	
180.000				-.3636	-.3022	-.2646	-.2351	-.2250	-.2068	-.1912	-.1640	-.1478	-.1147	
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100

PMI														
90.000	-.0871	-.0811	-.0972	-.0952	-.1072	-.1241	-.1135	-.1127	-.1122	-.1100	-.1134	-.1427	-.1887	.0000
100.000	-.1022	-.1318	-.1314	-.1285	-.1347	-.1548	-.1495	-.1489	-.1355	-.1333	-.1245	-.1304	-.1395	-.2003
110.000	-.1612	-.1634	-.1711	-.1825	-.1862	-.2079	-.2000	-.1962	-.1917	-.1862	-.1840	-.1722	-.1989	-.2327
120.000						-.3248							-.2262	
130.000						-.3684							-.2083	
140.000						-.4656							-.2097	
150.000						-.2643							-.2772	
160.000						-.1408							-.1813	
170.000						-.0932							-.1308	
180.000	-.0991	-.0923	-.0669	-.0816	-.0789	-.0725	-.0783	-.0847	-.0946	-.1037	-.1059	-.1029	-.1031	-.1104
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					

PMI														
80.000														
90.000														
100.000	-.2493	-.1228	-.2275	-.3549	-.3261	.0000								
110.000	-.2305	-.2514	-.2971	-.2791	-.1890	-.1987								
120.000	-.2246	-.2547	-.2054	-.0937	-.0913	-.1408								
130.000						.0406								
140.000						.0263								
150.000						-.0397								
160.000						.0426								
170.000						.2869								
180.000	-.2286	-.2462	-.1102	-.0426	.2853	.6866								

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/OA63

(RECON)

AMES 66-63- PRESSURE VENTING - SHUTTLE ORBITER

MACH (1) = 1.752 ALPHA (1) = 6.352

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.7290	.7470	.7670	.7830	.8030	.8290	.8620	.9000	.9400
PHI									
150.000									.2166
140.000									.3093
130.000									.2463
120.000									.2346
110.000									.2097
100.000									.1456
90.000									
80.000									
70.000									
60.000									
50.000									
40.000									
30.000									
20.000									
10.000									
0.000									

MACH (1) = 1.752 ALPHA (2) = 6.561

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000														
50.000														
40.000														
30.000														
20.000														
10.000														
0.000														
150.000														
140.000														
130.000														
120.000														
110.000														
100.000														
90.000														
80.000														
70.000														
60.000														
50.000														
40.000														
30.000														
20.000														
10.000														
0.000														

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000														
80.000														
70.000														
60.000														
50.000														
40.000														
30.000														
20.000														
10.000														
0.000														
150.000														
140.000														
130.000														
120.000														
110.000														
100.000														
90.000														
80.000														
70.000														
60.000														
50.000														
40.000														
30.000														
20.000														
10.000														
0.000														

PHI

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECORD 11)

MACH (1) = 1.732 ALPHA (2) = 0.561

SECTION (1) FUSELAGE

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 -.1182

70.000 -.1395 -.1526 .0000

80.000 -.1311 -.1694 -.1247

90.000 -.0681 -.0775 -.0673 -.1391 -.1024 .0000

100.000 -.1142 -.1240 -.1335 -.0747 -.0579 -.0751

110.000 -.0954 -.1142 -.0761 -.0536 -.0024 -.0858

120.000 .0167

130.000 .2000

140.000 .3043

150.000 .3166

160.000 .3163

170.000 .2537

180.000 -.0747 -.0918 .0046 .0671 .1365 .1562

MACH (1) = 1.751 ALPHA (3) = 10.500

SECTION (1) FUSELAGE

X/L .0870 .1280 .1640 .2035 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PHI

60.000 .0571 .0404 .0079

70.000 .0523 .0447 .0208

80.000 .0579 .0514 .0325

90.000 .0466 -.0050 -.0975 -.1216 -.1169 .0000 -.1045 -.1174 -.1157 -.1226 .0000 -.1485

100.000 -.1142 -.1304 -.1334 -.1309 -.1264 -.1306 -.1303 -.1407 -.1471 -.1613

110.000 -.1677 -.1646 -.1627 -.1627 -.1582 -.1660 -.1677 -.1753 -.1770 .0000 -.1656

120.000 -.1672

130.000 -.2503

140.000 -.2857

150.000 -.2714

160.000 -.2669

170.000 -.2677

180.000 -.2573 -.2377 -.2194 -.2009 -.1826 -.1652 -.1659 -.1613 -.1579 -.1488

X/L .4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.1480 -.1582 -.1802 -.1948 -.1451 -.1366 -.1344 -.1321 -.1279 -.1265 -.1125 -.1013 -.0977 -.0968 .0000

100.000 -.1596 -.1687 -.1928 -.1371 -.1237 -.1201 -.1212 -.1170 -.1097 -.1156 -.1007 -.0957 -.0834 -.0744 -.0887

110.000 -.1553 -.1360 -.1215 -.1149 -.1090 -.1041 -.1008 -.0983 -.0946 -.0896 -.0670 -.0642 -.0727 -.0643 -.0653

120.000

130.000 .0819

140.000 .0699

150.000 .0661

160.000 .0621

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(RECD11)

AMES 60-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (1) = 1.751 ALPHA (3) = 10.500

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
80.000															
100.000															
120.000															
140.000															
160.000															
180.000															
200.000															
220.000															
240.000															
260.000															
280.000															
300.000															
320.000															
340.000															
360.000															
380.000															
400.000															
420.000															
440.000															
460.000															
480.000															
500.000															
520.000															
540.000															
560.000															
580.000															
600.000															
620.000															
640.000															
660.000															
680.000															
700.000															
720.000															
740.000															
760.000															
780.000															
800.000															
820.000															
840.000															
860.000															
880.000															
900.000															
920.000															
940.000															
960.000															
980.000															
1000.000															

MACH (1) = 1.750 ALPHA (4) = 12.680

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
80.000															
100.000															
120.000															
140.000															
160.000															
180.000															
200.000															
220.000															
240.000															
260.000															
280.000															
300.000															
320.000															
340.000															
360.000															
380.000															
400.000															
420.000															
440.000															
460.000															
480.000															
500.000															
520.000															
540.000															
560.000															
580.000															
600.000															
620.000															
640.000															
660.000															
680.000															
700.000															
720.000															
740.000															
760.000															
780.000															
800.000															
820.000															
840.000															
860.000															
880.000															
900.000															
920.000															
940.000															
960.000															
980.000															
1000.000															

MACH (1) = 1.750 ALPHA (4) = 12.680

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
80.000															
100.000															
120.000															
140.000															
160.000															
180.000															
200.000															
220.000															
240.000															
260.000															
280.000															
300.000															
320.000															
340.000															
360.000															
380.000															
400.000															
420.000															
440.000															
460.000															
480.000															
500.000															
520.000															
540.000															
560.000															
580.000															
600.000															
620.000															
640.000															
660.000															
680.000															
700.000															
720.000															
740.000															
760.000															
780.000															
800.000															
820.000															
840.000															
860.000															
880.000															
900.000															
920.000															
940.000															
960.000															
980.000															
1000.000															

PHI

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER (RECD11)

MACH (3) = 1.751 ALPHA (5) = 14.700

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

180.000 -.2772
170.000 -.2783
160.000 -.2741

X/L

.4500 .4880 .5050 .5240 .5460 .5610 .5800 .6170 .6360 .6540 .6750 .6880 .7100

PHI

90.000 -.1469
100.000 -.1623
110.000 -.1783
120.000 -.1928
130.000 -.1966
140.000 -.1983
150.000 -.1991
160.000 -.1998
170.000 -.1998
180.000 -.1998

X/L

.7290 .7470 .7670 .7850 .8030 .8230 .8620 .9000 .9400

PHI

60.000 -.2261
70.000 -.3167
80.000 -.2902

90.000 -.1209

100.000 -.1846

110.000 -.1615

120.000 -.1754

130.000 -.0328

140.000 .0672

150.000 .1912

160.000 .2671

170.000 .4370

180.000 .4229

190.000 .3742

(REC'D)

JAMES 04-030 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACM} (2) = 2.017 \quad \text{ALPHA} (1) = 6.974$$

SECTION / DISCUSSION

Y/L	.0070	.1200	.1640	.2030	.2420	.2640	.2320	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI															
80.000	.5824	.6437	.6104												
90.000	.7149	.6473	.6193												
80.000	.0909	.0264	.0306												
90.000			.5443	-.0009	-.5841	-.1094	-.1140	.0000	-.1019	-.1045	-.1034	-.1104	-.1014	.0000	-.1166
100.000						-.1100	-.1237	-.1213	-.1184	-.1175	-.1163	-.1172	-.1166	-.1167	-.1166
110.000						-.1549	-.1567	-.1594	-.1426	-.1432	-.1417	-.1374	-.1324	.0000	-.1199
120.000						-.1354								.0000	
130.000						-.1779								-.1172	
140.000						-.2085								-.1282	
150.000						-.2012								-.1401	
160.000						-.1982								-.1339	
170.000						-.1968								-.1333	
180.000						-.1941	-.1774	-.1626	-.1523	-.1440	-.1349	-.1339	-.1321	-.1342	-.1246

[illegible][illegible]

JAMES 64-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC'D)

MACM (2) = 2.510 ALPHA (3) = 11.510

STANDARD NO. 10

DEPENDENT VARIABLE CP

F/L	.0497	.1200	.1640	.2030	.2420	.2840	.3190	.3380	.3570	.3750	.3940	.4090	.4310
PMI													
90.000	.0552	.0363	.0041										
95.000	.0487	.0366	.0135										
99.000	.0316	.0422	.0231										
99.000			.0434	-.0223	-.0927	-.1079	-.1031	.0000	-.0943	-.0969	-.1027	.0000	-.1175
100.000						-.1085	-.1019	-.1007	-.0992	-.1031	-.1113	-.1232	-.1273
110.000						-.1086	-.1254	-.1239	-.1221	-.1301	-.1401	-.1425	-.1493
120.000						-.1197						.0000	
130.000						-.1827						-.1181	
140.000						-.2206						-.1181	
150.000						-.2126						-.1374	
160.000						-.2176						-.1431	
170.000						-.2117						-.1437	
180.000						-.2094	-.1981	-.1870	-.1817	-.1726	-.1600	-.1431	-.1386
F/L	.4900	.4480	.4080	.3690	.3240	.2840	.2610	.2600	.2680	.2640	.2730	.2680	.2700
PMI													
90.000	-.1217	-.1262	-.1304	-.1319	-.1339	-.1393	-.1359	-.1365	-.1359	-.1315	-.1196	-.1114	.0000
100.000	-.1309	-.1402	-.1406	-.1393	-.1354	-.1361	-.1304	-.1251	-.1187	-.1190	-.1056	-.0971	-.0869
110.000	-.1503	-.1458	-.1387	-.1316	-.1236	-.1185	-.1096	-.1041	-.0979	-.0947	-.0886	-.0846	-.0759
120.000						-.0977						-.0790	
130.000						-.0726						-.0676	
140.000						-.0684						-.0582	
150.000						-.0670						-.0568	
160.000						-.0757						-.0676	
170.000						-.0683						-.0732	
180.000	-.1336	-.1321	-.1203	-.1164	-.1075	-.1074	-.0939	-.0933	-.0845	-.0807	-.0752	-.0734	-.0730
F/L	.7290	.7470	.7670	.7850	.8030	.8290	.8420	.9000	.9400				
PMI													
90.000													
95.000													
99.000													
99.000	-.1036	-.0747	-.1128	.1560	-.1317	.0000							
100.000	-.1145	-.1223	-.1418	-.1020	-.0762	-.0907							
110.000	-.0946	-.1137	-.0866	-.0370	-.0146	-.0803							
120.000						.0197							
130.000						.1251							
140.000						.2491							
150.000						.2733							
160.000						.2642							
170.000						.2411							
180.000	-.0779	-.0869	-.0499	.0073	.1048	.2621							

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0403

(RECO11)

AMES 64-030 PRESSURE VENTING - SHUTTLE ORBITER

MACH (2) = 2.016 ALPHA (4) = 15.060

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

R/L	.0875	.1200	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4090	.4310
PHI														
80.000	.0810	.0307	-.0003											
90.000	.0334	.0304	.0085											
100.000	.0339	.0319												
110.000		.0313	-.0218	-.0971	-.1133	-.1077	.0000	-.0960	-.0971	-.0977	-.0986	-.1043	.0000	-.1211
120.000					-.1133	-.0360	-.0933	-.0916	-.0937	-.0949	-.1089	-.1140	-.1327	-.1276
130.000					-.1130	-.1130	-.1136	-.1156	-.1262	-.1311	-.1359	-.1404	.0000	-.1493
140.000					-.1136								.0000	
150.000					-.1066								-.1255	
160.000					-.2286								-.1252	
170.000					-.2203								-.1256	
180.000					-.2160								-.1392	
190.000					-.2206								-.1448	
200.000					-.2163	-.2056	-.1968	-.1904	-.1836	-.1754	-.1689	-.1578	-.1543	-.1472

R/L	.4500	.4600	.4800	.5050	.5240	.5460	.5610	.5800	.6170	.6380	.6540	.6750	.6880	.7100
PHI														
90.000	-.1232	-.1282	-.1318	-.1374	-.1392	-.1454	-.1453	-.1506	-.1503	-.1506	-.1464	-.1360	-.1344	.0000
100.000	-.1335	-.1419	-.1445	-.1448	-.1469	-.1481	-.1474	-.1462	-.1395	-.1377	-.1256	-.1172	-.1090	-.1090
110.000	-.1355	-.1382	-.1378	-.1314	-.1475	-.1410	-.1325	-.1234	-.1161	-.1114	-.1049	-.1014	-.0962	-.0898
120.000					-.1226								-.0863	
130.000					-.0910								-.0803	
140.000					-.0763								-.0681	
150.000					-.0673								-.0636	
160.000					-.0731								-.0716	
170.000					-.0675								-.0766	
180.000	-.1416	-.1356	-.1196	-.1122	-.1015	-.0921	-.0875	-.0927	-.0804	-.0793	-.0787	-.0804	-.0819	-.0866

R/L	.7290	.7470	.7670	.7850	.8030	.8290	.8420	.9000	.9400					
PHI														
80.000														
90.000														
100.000														
110.000	-.1206	-.0887	-.1366	-.1793	-.1616	.0700								
120.000	-.1337	-.1415	-.1700	-.1256	-.1011	-.1192								
130.000	-.1146	-.1299	-.1029	-.0585	-.0373	-.1047								
140.000					.0112									
150.000					.0755									
160.000					.1966									
170.000					.2497									
180.000					.2984									
190.000					.2836									
200.000	-.0819	-.1048	-.0933	-.0811	.0935	.3193								

AMES 64-630 PRESSURE VENTING - SMUTTY CRABBER

(1001)

$$\text{MACM} (2) = 2.018 \quad \text{ALPHA} (3) = 15.005$$
SECTION (1) FUSELAGE
DEPENDENT VARIABLE CP

N/L	50870	12800	16440	20330	24220	28040	30820	30110	31900	33610	35370	37350	39400	40510	43110
PW1															
80,000	.0466	.0304	-.0018												
90,000	.0227	.0230	.0023												
100,000	.0153	.0134	.0135												
110,000		.0266		-.0183	-.0945	-.1105	-.1056	.0000	-.0980	-.0989	-.1015	-.1036	-.1095	.0000	-.1236
120,000						-.1112	-.1062	-.1009	-.1001	-.1027	-.1039	-.1069	-.1149	-.1223	-.1256
130,000						-.1036	-.1033	-.1074	-.1089	-.1200	-.1256	-.1297	-.1377	.0000	-.1529
140,000						-.1057								.0000	
150,000						-.1078							-.1446		
160,000						-.2365							-.1324		
170,000						-.2274							-.1316		
180,000						-.2241							-.1316		
190,000						-.2256							-.1422		
200,000						-.2250	-.2141	-.2048	-.1960	-.1904	-.1828	-.1725	-.1654	-.1651	-.1556

[illegible]

Year	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413
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DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0483

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECO11)

MACH (2) = 2.016 ALPHA (6) = 17.180

SECTION (1) FUELAGE DEPENDENT VARIABLE CP

R/L	.0470	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI														
60.000	.0464	.0308	.0022											
70.000	.0142	.0174	.0029											
80.000	.0018	.0082	.0104											
90.000		.0263	-.0130	-.0948	-.1117	-.1034	.0000	-.1068	-.1109	-.1132	-.1138	-.1127	.0000	-.1286
100.000					-.1126	-.1123	-.1091	-.1050	-.1082	-.1109	-.1164	-.1197	-.1297	-.1310
110.000					-.1027	-.1036	-.1109	-.1132	-.1229	-.1295	-.1334	-.1419	.0000	-.1528
120.000					-.1042								.0000	
130.000					-.1668								-.1631	
140.000					-.2460								-.1492	
150.000					-.2355								-.1236	
160.000					-.2308								-.1245	
170.000					-.2331								-.1401	
180.000					-.2329	-.2216	-.2123	-.2053	-.1980	-.1872	-.1764	-.1696	-.1714	-.1620
R/L	.4300	.4680	.4880	.5030	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6880	.7100
PMI														
90.000	-.1284	-.1342	-.1378	-.1434	-.1466	-.1569	-.1560	-.1665	-.1732	-.1851	-.1839	-.1929	-.2030	.0000
100.000	-.1391	-.1425	-.1472	-.1466	-.1503	-.1569	-.1531	-.1591	-.1572	-.1636	-.1569	-.1551	-.1519	-.1534
110.000	-.1587	-.1590	-.1614	-.1628	-.1640	-.1575	-.1549	-.1499	-.1439	-.1349	-.1293	-.1261	-.1191	-.1188
120.000						-.1454							-.1011	
130.000						-.1627							-.1180	
140.000						-.1067							-.1145	
150.000						-.0742							-.0965	
160.000						-.0736							-.1006	
170.000						-.0864							-.1191	
180.000	-.1516	-.1483	-.1375	-.1301	-.1328	-.1201	-.1250	-.1311	-.1299	-.1337	-.1412	-.1464	-.1511	-.1586
R/L	.7290	.7470	.7670	.7850	.8030	.8290	.8420	.9000	.9400					
PMI														
90.000														
100.000														
110.000														
120.000														
130.000														
140.000														
150.000														
160.000														
170.000														
180.000														
PMI														
90.000	-.1727	-.1542	-.1587	-.2448	-.2318	.0000								
100.000	-.2010	-.2044	-.2284	-.1883	-.1687	-.1857								
110.000	-.1713	-.1874	-.1474	-.1147	-.0915	-.1634								
120.000						-.0284								
130.000						-.0284								
140.000						.0500								
150.000						.2221								
160.000						.2192								
170.000						.2235								
180.000	-.1341	-.1488	-.1741	-.1887	-.0417	.2285								

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECD12) (16 OCT 73)

PARAMETRIC DATA

BETA = 6.000 ELEVTR = -15.000
 AILRON = .000 RUDDER = .000
 RN/L = 3.500

REFERENCE DATA

SREF = .0000 58 IN. XMRP = .0000 IN.
 LREF = .0000 IN. YMRP = .0000 IN.
 BREF = .0000 IN. ZMRP = .0000 IN.
 SCALE = .0170 SCALE

MACH (1) = .603 ALPHA (1) = 6.200

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3330	.3570	.3750	.3940	.4050	.4310
PHI															
60.000	-.1109	-.1124	-.1242												
70.000	-.0731	-.1087	-.1989												
80.000	-.0768	-.1436	-.2001												
90.000		-.2423	-.3741	-.3916	-.2329	-.1920	.0000	-.1299	-.1605	-.1349	-.1221	-.0870	.0000	-.1081	
100.000					-.2542	-.2201	-.1864	-.1446	-.1233	-.1096	-.1202	-.0863	-.1100	-.0952	
110.000					-.2969	-.2560	-.2042	-.1511	-.1252	-.1111	-.0822	-.0747	.0000	-.0747	
120.000					-.2613									.0000	
130.000					-.3216									-.0655	
140.000					-.2876									-.0715	
150.000					-.2439									-.0870	
160.000					-.2239									-.0835	
170.000					-.2467									-.0999	
180.000					-.2292	-.2079	-.1873	-.1574	-.1492	-.1171	-.0990	-.0908	-.0952	-.0709	

X/L	.4500	.4660	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.0768	-.0878	-.0796	-.0662	-.0792	-.1080	-.1027	-.1120	-.1375	-.1715	-.1924	-.2182	-.2254	-.2195	.0000
100.000	-.0693	-.0982	-.1013	-.0865	-.0871	-.1058	-.1002	-.1123	-.1092	-.1547	-.1532	-.1971	-.2042	-.1672	-.1462
110.000	-.0618	-.0814	-.0628	-.0843	-.0792	-.0934	-.0899	-.0933	-.0962	-.1049	-.1373	-.1476	-.1491	-.1342	-.1026
120.000					-.0657									-.0853	
130.000					-.0790									-.0676	
140.000					-.0737									-.0551	
150.000					-.0501									-.0517	
160.000					-.0666									-.0423	
170.000					-.0632									-.0467	
180.000	-.0692	-.0923	-.0814	-.0843	-.0783	-.0709	-.0744	-.0772	-.0828	-.0797	-.0794	-.0803	-.0820	-.0430	-.0111

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
60.000									
70.000									
80.000									
90.000	-.1691	.0146	-.0726	-.0609	-.0321	.0000	.0160	.0059	-.0173
100.000	-.1610	-.1007	-.0479	-.0371	-.0439	-.0461			
110.000	-.0762	-.0704	-.0163	-.0126	-.0616	-.1209			
120.000						-.2393			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD12)

MACH (1) = .803 ALPHA (1) = 6.203

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8420 .9000 .9400

PHI

130.000 -.1428
 140.000 -.0946
 150.000 -.0047
 160.000 .0001
 170.000 .0242
 180.000 -.0681 -.0417 .1005 .1297 .1568 .1726

MACH (1) = .599 ALPHA (2) = 6.309

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0670 .1260 .1640 .2030 .2420 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

80.000 -.1118 -.1103 -.2086
 90.000 -.0820 -.1132 -.2121
 100.000 -.0829 -.1273 -.2146
 110.000 -.2310 -.3755 -.4099
 120.000 -.2615 -.1864 .0000
 130.000 -.2640 -.2163 -.1498
 140.000 -.2977 -.2349 -.2154
 150.000 -.2807 -.1218 -.1070
 160.000 -.3444
 170.000 -.3006
 180.000 -.2612
 190.000 -.2329
 200.000 -.2524
 210.000 -.2618 -.1971 -.1580
 220.000 -.1624 -.1379 -.1092
 230.000 -.1068 -.0969 -.0978
 240.000 -.0867

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.1004 -.1007 -.1026
 100.000 -.1205 -.1080 -.1116
 110.000 -.0797 -.0943 -.0806
 120.000 -.0921 -.0921 -.0921
 130.000 -.1211 -.1211 -.1211
 140.000 -.1288 -.1288 -.1288
 150.000 -.1128 -.1128 -.1128
 160.000 -.0692
 170.000 -.0867
 180.000 -.0641
 190.000 -.0663
 200.000 -.0918
 210.000 -.0841 -.0841 -.0841
 220.000 -.0889 -.0889 -.0889
 230.000 -.0962 -.0962 -.0962
 240.000 -.1043 -.1043 -.1043
 250.000 -.0815 -.0815 -.0815
 260.000 -.0730 -.0730 -.0730
 270.000 -.0658 -.0658 -.0658
 280.000 -.0369 -.0369 -.0369
 290.000 -.0198

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8420 .9000 .9400

PHI

JAMES 88-610 PRESSURE VENTING - SHUTTLE ORBITER

MACH (1) = .599 ALPHA (2) = 0.307

SECTION (1) FUSELAGE

	7290	7470	7670	7850	8250	8520	9000	9400
Y/L								

PMI
05000
.1384

[illegible]

90,000	-2,076	-0,649	-0,899	-0,734	-0,528	-0,093	0,267
90,000	-1,336	-0,933	-0,634	-0,484	-0,222	-0,050	
10,000	-1,143	-0,628	-0,379	-0,279	-0,058	-0,112	

10,000	-1145	-10279	-10650	-1112
20,000				-2063
30,000				-1389

30.000	- .1389
40.000	- .0865
50.000	.0543

30.000	.0043
60.000	.0168
90.000	.0749

	0.000	- .1102	.0390	.7636	.0931	.1250	.1323	.0143
70.000								

MACH (1) = .652 ALPHA (3) = 10.380

SECTION (1) FUSELAGE

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2
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PMI

60,000 - 1936 - 1126 - 1937

IN. 000 - .0897 - .5954 - .2073

40.000 - 50.000 - 60.000 - 70.000 - 80.000 - 90.000 - 100.000 - 110.000 - 120.000 - 130.000 - 140.000 - 150.000 - 160.000 - 170.000 - 180.000 - 190.000 - 200.000 - 210.000 - 220.000 - 230.000 - 240.000 - 250.000 - 260.000 - 270.000 - 280.000 - 290.000 - 300.000 - 310.000 - 320.000 - 330.000 - 340.000 - 350.000 - 360.000 - 370.000 - 380.000 - 390.000 - 400.000 - 410.000 - 420.000 - 430.000 - 440.000 - 450.000 - 460.000 - 470.000 - 480.000 - 490.000 - 500.000 - 510.000 - 520.000 - 530.000 - 540.000 - 550.000 - 560.000 - 570.000 - 580.000 - 590.000 - 600.000 - 610.000 - 620.000 - 630.000 - 640.000 - 650.000 - 660.000 - 670.000 - 680.000 - 690.000 - 700.000 - 710.000 - 720.000 - 730.000 - 740.000 - 750.000 - 760.000 - 770.000 - 780.000 - 790.000 - 800.000 - 810.000 - 820.000 - 830.000 - 840.000 - 850.000 - 860.000 - 870.000 - 880.000 - 890.000 - 900.000 - 910.000 - 920.000 - 930.000 - 940.000 - 950.000 - 960.000 - 970.000 - 980.000 - 990.000 - 1000.000 - 1010.000 - 1020.000 - 1030.000 - 1040.000 - 1050.000 - 1060.000 - 1070.000 - 1080.000 - 1090.000 - 1100.000 - 1110.000 - 1120.000 - 1130.000 - 1140.000 - 1150.000 - 1160.000 - 1170.000 - 1180.000 - 1190.000 - 1200.000 - 1210.000 - 1220.000 - 1230.000 - 1240.000 - 1250.000 - 1260.000 - 1270.000 - 1280.000 - 1290.000 - 1300.000 - 1310.000 - 1320.000 - 1330.000 - 1340.000 - 1350.000 - 1360.000 - 1370.000 - 1380.000 - 1390.000 - 1400.000 - 1410.000 - 1420.000 - 1430.000 - 1440.000 - 1450.000 - 1460.000 - 1470.000 - 1480.000 - 1490.000 - 1500.000 - 1510.000 - 1520.000 - 1530.000 - 1540.000 - 1550.000 - 1560.000 - 1570.000 - 1580.000 - 1590.000 - 1600.000 - 1610.000 - 1620.000 - 1630.000 - 1640.000 - 1650.000 - 1660.000 - 1670.000 - 1680.000 - 1690.000 - 1700.000 - 1710.000 - 1720.000 - 1730.000 - 1740.000 - 1750.000 - 1760.000 - 1770.000 - 1780.000 - 1790.000 - 1800.000 - 1810.000 - 1820.000 - 1830.000 - 1840.000 - 1850.000 - 1860.000 - 1870.000 - 1880.000 - 1890.000 - 1900.000 - 1910.000 - 1920.000 - 1930.000 - 1940.000 - 1950.000 - 1960.000 - 1970.000 - 1980.000 - 1990.000 - 2000.000 - 2010.000 - 2020.000 - 2030.000 - 2040.000 - 2050.000 - 2060.000 - 2070.000 - 2080.000 - 2090.000 - 2100.000 - 2110.000 - 2120.000 - 2130.000 - 2140.000 - 2150.000 - 2160.000 - 2170.000 - 2180.000 - 2190.000 - 2200.000 - 2210.000 - 2220.000 - 2230.000 - 2240.000 - 2250.000 - 2260.000 - 2270.000 - 2280.000 - 2290.000 - 2300.000 - 2310.000 - 2320.000 - 2330.000 - 2340.000 - 2350.000 - 2360.000 - 2370.000 - 2380.000 - 2390.000 - 2400.000 - 2410.000 - 2420.000 - 2430.000 - 2440.000 - 2450.000 - 2460.000 - 2470.000 - 2480.000 - 2490.000 - 2500.000 - 2510.000 - 2520.000 - 2530.000 - 2540.000 - 2550.000 - 2560.000 - 2570.000 - 2580.000 - 2590.000 - 2600.000 - 2610.000 - 2620.000 - 2630.000 - 2640.000 - 2650.000 - 2660.000 - 2670.000 - 2680.000 - 2690.000 - 2700.000 - 2710.000 - 2720.000 - 2730.000 - 2740.000 - 2750.000 - 2760.000 - 2770.000 - 2780.000 - 2790.000 - 2800.000 - 2810.000 - 2820.000 - 2830.000 - 2840.000 - 2850.000 - 2860.000 - 2870.000 - 2880.000 - 2890.000 - 2900.000 - 2910.000 - 2920.000 - 2930.000 - 2940.000 - 2950.000 - 2960.000 - 2970.000 - 2980.000 - 2990.000 - 3000.000 - 3010.000 - 3020.000 - 3030.000 - 3040.000 - 3050.000 - 3060.000 - 3070.000 - 3080.000 - 3090.000 - 3100.000 - 3110.000 - 3120.000 - 3130.000 - 3140.000 - 3150.000 - 3160.000 - 3170.000 - 3180.000 - 3190.000 - 3200.000 - 3210.000 - 3220.000 - 3230.000 - 3240.000 - 3250.000 - 3260.000 - 3270.000 - 3280.000 - 3290.000 - 3300.000 - 3310.000 - 3320.000 - 3330.000 - 3340.000 - 3350.000 - 3360.000 - 3370.000 - 3380.000 - 3390.000 - 3400.000 - 3410.000 - 3420.000 - 3430.000 - 3440.000 - 3450.000 - 3460.000 - 3470.000 - 3480.000 - 3490.000 - 3500.000 - 3510.000 - 3520.000 - 3530.000 - 3540.000 - 3550.000 - 3560.000 - 3570.000 - 3580.000 - 3590.000 - 3600.000 - 3610.000 - 3620.000 - 3630.000 - 3640.000 - 3650.000 - 3660.000 - 3670.000 - 3680.000 - 3690.000 - 3700.000 - 3710.000 - 3720.000 - 3730.000 - 3740.000 - 3750.000 - 3760.000 - 3770.000 - 3780.000 - 3790.000 - 3800.000 - 3810.000 - 3820.000 - 3830.000 - 3840.000 - 3850.000 - 3860.000 - 3870.000 - 3880.000 - 3890.000 - 3900.000 - 3910.000 - 3920.000 - 3930.000 - 3940.000 - 3950.000 - 3960.000 - 3970.000 - 3980.000 - 3990.000 - 4000.000 - 4010.000 - 4020.000 - 4030.000 - 4040.000 - 4050.000 - 4060.000 - 4070.000 - 4080.000 - 4090.000 - 4100.000 - 4110.000 - 4120.000 - 4130.000 - 4140.000 - 4150.000 - 4160.000 - 4170.000 - 4180.000 - 4190.000 - 4200.000 - 4210.000 - 4220.000 - 4230.0

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[illegible]

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L	.4527	.4687	.4865
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97.000 - .1355 - .1534 - .1565

10.000 - .1419 - .1705 - .1829

10.000 - 1394 - 1316 - 1309

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TABULATED SOURCE DATA - 1A29/OA83

PAGE 1403

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

(RECD12)

MACH (1) = .802 ALPHA (2) = 15.360

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .4500 .4600 .4800 .5000 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6980 .7100

PHI

180.000 -.0754
 170.000 -.0810
 160.000 -.1023 -.1011 -.1172 -.1131 -.1068 -.0994 -.1082 -.1194 -.1132 -.1232 -.1122 -.1025 -.0931 -.0841 -.0255

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 .1251
 70.000 .0605 .1169 .0000
 80.000 .0211 .0492 .0163
 90.000 -.2366 -.1163 -.1089 -.0757 -.0603 .0000 .0342 -.0060 -.0271
 100.000 -.1687 -.1048 -.0631 -.0606 -.0763 -.0708
 110.000 -.1203 -.0645 -.0372 -.0354 -.0966 -.1061
 120.000 -.2535
 130.000 -.1112
 140.000 -.1071
 150.000 -.0097
 160.000 .0170
 170.000 .0933
 180.000 -.1287 .0136 .0685 .0614 .1112 .0651

MACH (1) = .802 ALPHA (4) = 12.490

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0670 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 -.1168 -.1010 -.2105
 70.000 -.1104 -.1119 -.2002
 80.000 -.1032 -.1062 -.2008
 90.000 -.2142 -.3526 -.4155 -.3026 -.2170 .0000 -.2029 -.2549 -.2248 -.2176 -.1782 .0000 -.2096
 100.000 -.2915 -.2633 -.2352 -.2054 -.1872 -.1750 -.2069 -.1725 -.2076 -.1633
 110.000 -.3116 -.2733 -.2649 -.2232 -.1900 -.1809 -.1598 -.1598 .0000
 120.000 -.2934
 130.000 -.3873
 140.000 -.3119
 150.000 -.2602
 160.000 -.2524
 170.000 -.2559
 180.000 -.2574 -.2107 -.1709 -.1656 -.1462 -.1155 -.1107 -.1117 -.0968 -.0981

X/L

.4500 .4600 .4800 .5000 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6980 .7100

PHI

JAMES 68-637 PRESSURE VENTING - SHUTTLE ORBITER (REC512)

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MACH ( 1 ) = .052  ALPHA ( 4 ) = 12.435

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AD 376712VA LMS3034330

[illegible]

	7290	.7470	.7670	.7850	.8030	.8250	.8520	.8900	.9400
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p=1							
65.0000						.0796	
70.0000						.0228	.0200
75.0000						-.0018	.0184
80.0000						-.0247	-.0191
85.0000	-.2917	-.1997	-.1656	-.1662	-.1380	.0000	
90.0000	-.2260	-.1613	-.1368	-.1111	-.1309	-.1237	
95.0000	-.1675	-.1135	-.0920	-.0754	-.1396	-.2722	
100.0000						-.3303	
105.0000						-.1587	
110.0000						-.1138	
115.0000						-.0380	
120.0000						.0191	
125.0000						.1161	
130.0000	-.1568	.0176	.0571	.0067	.1395	.1829	

MACRO (1) = .609 ALPHA (5) = .4630

DEPENDENT VARIABLE CP

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432
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AMES 86-630 PRESSURE VENTING - SHUTTLE C6BITER

(RECD12)

MACH (1) = .599 ALPHA (2) = 16.865

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L .0875 .1280 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 -1.1480 -1.1403 -1.2716
 70.000 -1.1756 -1.1371 -1.1942
 80.000 -1.1576 -1.1580 -1.2349
 90.000 -1.2210 -1.3730 -1.4736
 100.000 -1.3513 -1.5044 -1.6023
 110.000 -1.3472 -1.5447 -1.6314
 120.000 -1.3535
 130.000 -1.4235
 140.000 -1.3292
 150.000 -1.2753
 160.000 -1.2519
 170.000 -1.2559
 180.000 -1.3412

X/L

.4500 .4680 .4880 .5050 .5240 .5460 .5610 .5850 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -1.2441 -1.2959 -1.2712 -1.2614 -1.2760 -1.3353 -1.3329 -1.3435 -1.3910 -1.4821 -1.4716 -1.5279 -1.5376 -1.5090
 100.000 -1.2288 -1.2700 -1.2690 -1.2317 -1.2416 -1.2915 -1.2939 -1.3234 -1.3061 -1.3920 -1.3908 -1.4490 -1.4732 -1.4034
 110.000 -1.2374 -1.2378 -1.2135 -1.2231 -1.2304 -1.2620 -1.2454 -1.2524 -1.2451 -1.2675 -1.3349 -1.3566 -1.3214 -1.3113
 120.000 -1.2014
 130.000 -1.2489
 140.000 -1.1667
 150.000 -1.0930
 160.000 -1.0980
 170.000 -1.1049
 180.000 -1.1316 -1.1395 -1.1344 -1.1339 -1.1733 -1.1552 -1.1757 -1.1728 -1.1754 -1.1754 -1.1837 -1.1768 -1.1360 -1.1344 -1.0424

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 .0268
 70.000 -1.0464 .0483 .0770
 80.000 -1.0813 -1.0339 -1.0155
 90.000 -1.4108 -1.3619 -1.3353 -1.3150 -1.2844 .0770
 100.000 -1.3391 -1.2850 -1.2660 -1.2613 -1.2960 -1.2702
 110.000 -1.2804 -1.2180 -1.2107 -1.2282 -1.3134 -1.3681
 120.000 -1.4845
 130.000 -1.2572
 140.000 -1.0711
 150.000 -1.0127
 160.000 -1.0471
 170.000 -1.1451
 180.000 -1.2885 -1.0233 .0185 .0619 .1245 .0429

TABULATED SOURCE DATA - 1A29/0A63

DATE 24 MAR 74

(REC012)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (2) = .750 ALPHA (2) = 8.503

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
P-HI															
60.000	-.0912	-.0936	-.1935												
70.000	-.0760	-.0830	-.1951												
80.000	-.0673	-.1101	-.1977												
90.000		-.2252	-.4336	-.4650	-.2969	-.2139	-.0000	-.1625	-.1859	-.1620	-.1410	-.1175	.0000	-.1355	
100.000					-.3019	-.2321	-.2113	-.1567	-.1441	-.1169	-.1292	-.1148	-.1355	-.1071	
110.000					-.3105	-.2643	-.2284	-.1764	-.1321	-.1184	-.0968	-.0912	.0000	-.0952	
120.000					-.3244								.0000		
130.000					-.3574								-.0934		
140.000					-.4050								-.0795		
150.000					-.4834								-.0780		
160.000					-.4834								-.0742		
170.000					-.4947								-.0857		
180.000					-.4626	-.2653	-.1860	-.1378	-.1163	-.1035	-.1010	-.0896	-.0931	-.0827	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
P-HI														
90.000	-.1133	-.1159	-.1029	-.1029	-.0999	-.1326	-.1079	-.1452	-.1680	-.2284	-.3133	-.3492	-.3393	.0000
100.000	-.1024	-.1214	-.1209	-.1052	-.0853	-.1243	-.1353	-.1408	-.1418	-.2229	-.2788	-.2992	-.2780	-.2557
110.000	-.0873	-.0914	-.0925	-.0967	-.1036	-.1190	-.1144	-.1246	-.1395	-.1689	-.2205	-.2273	-.2200	-.1988
120.000					-.0946								-.1509	
130.000					-.1042								-.1319	
140.000					-.1037								-.1039	
150.000					-.0817								-.1094	
160.000					-.0929								-.0971	
170.000					-.0958								-.0858	
180.000	-.0896	-.1034	-.0860	-.1039	-.0914	-.1029	-.1068	-.1180	-.1207	-.1280	-.1172	-.1070	-.0837	-.0551

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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P-HI									
60.000							.1092		
70.000							.0577	.0999	.0000
80.000							.0127	.0358	.0042
90.000	-.2928	-.1336	-.1661	-.1349	-.1149	.0000	-.0122	-.0104	-.0374
100.000	-.2219	-.1590	-.1261	-.1074	-.1185	-.0977			
110.000	-.1590	-.1128	-.0845	-.0905	-.1177	-.1917			
120.000						-.3177			
130.000						-.1870			
140.000						-.0379			
150.000						-.0120			
160.000						.0281			
170.000						.0746			
180.000	-.1752	.0241	.0637	.0972	.1348	.1176			

PAGE 24 MAY 74

WFS 84-030 PRESSURE VENTING - SAUTILE ORBITER

REC-121

$$\text{ALPHA} (3) = 10.505$$

DEPENDENT VARIABLE OF

[illegible]

X/L	.4500	.4600	.4800	.4900	.5000	.5240	.5460	.5610	.5900	.6170	.6360	.6540	.6750	.6860	.7110
PWt															
90.000	-.1813	-.1447	-.1478	-.1354	-.1304	-.1478	-.1336	-.1650	-.2047	-.2850	-.3317	-.3909	-.4335	-.4268	.0000
100.000	-.1315	-.1536	-.1576	-.1325	-.1339	-.1672	-.1550	-.1759	-.1717	-.2684	-.2815	-.3501	-.3600	-.3410	-.2908
110.000	-.1359	-.1106	-.1256	-.1344	-.1331	-.1441	-.1320	-.1269	-.1655	-.1066	-.2416	-.2735	-.2667	-.2676	-.2241
120.000						-.1014								-.2016	
130.000						-.1216								-.1594	
140.000						-.1116								-.1379	
150.000						-.0754								-.0794	
160.000						-.0954								-.1192	
170.000						-.1060								-.1028	
180.000	-.1056	-.1075	-.1109	-.1270	-.1207	-.1276	-.1325	-.1279	-.1455	-.1429	-.1542	-.1542	-.1135	-.1041	-.0816
X/L	.7200	.7400	.7600	.7800	.8000	.8290	.8590	.8820	.9000	.9400					

[illegible]

DATE 24 MAR 74 TABULATED SOURCE DATA - 1429/0483

(RECO12)

AMES 64-030 PRESSURE VENTING - SHUTTLE ORBITER

MACH (2) = .751 ALPHA (4) = 12.600

SECTION (11) FUSELAGE

		DEPENDENT VARIABLE CP														
X/L		.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI																
80.000		-.1170	-.0979	-.1840												
90.000		-.0862	-.0824	-.1963												
100.000		-.0895	-.0908	-.1783												
110.000			-.1971	-.4163	-.5381	-.5134	-.2403	.0000	-.2191	-.2497	-.2120	-.2115	-.1833	.0000	-.2154	
120.000						-.3131	-.2811	-.2691	-.2136	-.2063	-.1843	-.1963	-.1712	-.2056	-.1672	
130.000						-.3134	-.2949	-.2942	-.2314	-.2003	-.1626	-.1725	-.1534	.0000	-.1481	
140.000							-.3624							.0000		
150.000							-.4676							-.1002		
160.000							-.4852							-.1025		
170.000							-.5622							-.0739		
180.000							-.5831							-.0759		
190.000							-.6151							-.1678		
200.000							-.6004	-.3789	-.2633	-.1474	-.1427	-.1027	-.1004	-.1092	-.1012	-.0991
X/L		.4500	.4680	.4880	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI																
90.000		-.1787	-.1641	-.1609	-.1615	-.1683	-.1993	-.1782	-.2241	-.2476	-.3322	-.3565	-.4490	-.4824	-.4660	.0000
100.000		-.1579	-.1615	-.1715	-.1570	-.1577	-.1863	-.1949	-.2288	-.2262	-.3077	-.3133	-.3951	-.4024	-.3810	-.3452
110.000		-.1348	-.1519	-.1477	-.1477	-.1464	-.1776	-.1672	-.1826	-.2121	-.2398	-.2679	-.3002	-.3044	-.3109	-.2778
120.000							-.1260								-.2220	
130.000							-.1651								-.2011	
140.000							-.1429								-.1683	
150.000							-.1098								-.1451	
160.000							-.1030								-.1242	
170.000							-.1093								-.1300	
180.000		-.1063	-.1347	-.1173	-.1302	-.1392	-.1547	-.1531	-.1657	-.1724	-.1683	-.1490	-.1540	-.1427	-.1255	-.0826
X/L		.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PHI																
80.000								.0353								
90.000								-.0247	.0658	.0000						
100.000								-.0848	-.0338	-.0035						
110.000								-.1104	-.0635	-.0441						
120.000		-.3898	-.2627	-.2750	-.2739	-.2311	.0000									
130.000		-.2789	-.2480	-.2381	-.2187	-.2329	-.1982									
140.000		-.2467	-.1767	-.1479	-.1757	-.2425	-.3264									
150.000							-.4370									
160.000							-.2526									
170.000							-.0524									
180.000							-.0120									
190.000							.0361									
200.000							.1087									
210.000		-.2187	-.0201	.0108	.0335	.1127	.1119									

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

(REC012)

MACH (2) = .742 ALPHA (3) = 14.770

SECTION (11) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI														
90.000	-.1292	-.1044	-.1932											
100.000	-.1144	-.0802	-.1908											
90.000	-.1258	-.0908	-.1859											
90.000		-.1780	-.4002	-.3425	-.3545	-.2928	.0000	-.2381	-.2910	-.2793	-.2553	-.2336	.0000	-.2482
100.000					-.3341	-.3190	-.3161	-.2498	-.2930	-.2227	-.2433	-.2082	-.2537	-.1911
110.000					-.3347	-.3417	-.3398	-.2923	-.2516	-.2339	-.2152	-.1889	.0000	-.1897
120.000					-.4080								.0000	
130.000					-.5082								-.1289	
140.000					-.5401								-.1100	
150.000					-.5892								-.0929	
160.000					-.6158								-.0791	
170.000					-.6591								-.0822	
180.000					-.6560	-.4966	-.3252	-.2391	-.1209	1277	-.1140	-.1016	-.1050	-.0931

X/L	.4500	.4680	.4880	.5050	.5240	.5460	.5610	.5800	.6170	.6380	.6540	.6730	.6880	.7100
PMI														
90.000	-.2030	-.2008	-.2111	-.2220	-.2191	-.2816	-.2247	-.2838	-.2890	-.3929	-.4177	-.3350	-.3753	.0000
100.000	-.1916	-.2156	-.2272	-.1985	-.1736	-.2235	-.2333	-.2635	-.2502	-.3424	-.3761	-.4388	-.5059	-.4178
110.000	-.1792	-.1890	-.1647	-.1837	-.1897	-.2127	-.1958	-.2130	-.2349	-.2879	-.3124	-.3725	-.3834	-.3359
120.000						-.1789							-.3420	
130.000						-.2122							-.2508	
140.000						-.1711							-.1959	
150.000						-.1265							-.1751	
160.000						-.1143							-.1426	
170.000						-.1234							-.1588	
180.000	-.1285	-.1332	-.1404	-.1694	-.1554	-.1539	-.1586	-.1916	-.1815	-.1877	-.2038	-.2134	-.1715	-.1025

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI														
90.000														
100.000														
90.000														
90.000	-.5046	-.3575	-.3683	-.3575	-.3611	.0000								
100.000	-.5040	-.3402	-.2874	-.3136	-.3795	-.3419								
110.000	-.3027	-.3167	-.1982	-.2385	-.3513	-.4543								
120.000						-.5046								
130.000						-.2980								
140.000						-.0867								
150.000						-.0046								
160.000						.0432								
170.000						.1308								
180.000	-.2884	-.0940	.0102	.0501	.0741	.0355								

AMES 64-830 PRESSURE VENTING - SHUTTLE ORBITER

(REC012)

MACH (2) = .790 ALPHA (6) = 16.840

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PMI

80.0000 -.1306 -.1291 -.2135
 90.0000 -.1336 -.1055 -.1710
 90.0000 -.1380 -.0932 -.1769
 90.0000 -.1909 -.3941 -.5537 -.3451 -.3150 .0000 -.3011 -.3396 -.3375 -.2757 -.2553 .0000 -.2654
 100.0000 -.3799 -.3375 -.3315 -.2982 -.2935 -.2620 -.2668 -.2569 -.2763 2498
 110.0000 -.3692 -.2713 -.3925 -.3367 -.2642 -.2630 -.2492 -.2165 .0000 -.2200
 120.0000 -.4114
 130.0000 -.5117
 140.0000 -.5912
 150.0000 -.6077
 160.0000 -.6800
 170.0000 -.6674
 180.0000 -.6660 -.4331 -.3137 -.2359 -.1426 -.1306 -.1063 -.0853 -.1018 -.1248
 190.0000

X/L

.4950 .4880 .4880 .5050 .5240 .5460 .5610 .5800 .6170 .6360 .6540 .6730 .6880 .7100

PMI

90.0000 -.2391 -.2341 -.2628 -.2411 -.2462 -.3069 -.2799 -.3327 -.3716 -.4771 -.4967 -.5792 -.6121 -.6426 .0000
 100.0000 -.2357 -.2216 -.2366 -.2456 -.2096 -.2732 -.2645 -.3016 -.2820 -.4181 -.3870 -.4855 -.5653 -.5528 -.4314
 110.0000 -.2122 -.1879 -.2036 -.2099 -.2279 -.2358 -.2337 -.2431 -.2627 -.2672 -.3588 -.3943 -.3977 -.4124 -.3312
 120.0000 -.1937
 130.0000 -.2483
 140.0000 -.1890
 150.0000 -.1269
 160.0000 -.1370
 170.0000 -.1373
 180.0000 -.1264 -.1555 -.1818 -.1775 -.1613 -.1936 -.1960 -.2193 -.2308 .2176 -.2213 -.2327 -.1863 -.1467
 190.0000

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9400 .9400

PMI

80.0000 -.1568
 90.0000 -.1728 -.0128 .0070
 90.0000 -.2226 -.0929 -.0250
 90.0000 -.5822 -.4592 -.4618 -.4908 -.5054 .0000 -.2446 -.1585 -.0771
 100.0000 -.4387 -.3984 -.3995 -.4034 -.5064 -.4617
 110.0000 -.5515 -.2957 -.2837 -.3131 -.4570 -.5566
 120.0000 -.5940
 130.0000 -.3090
 140.0000 -.0903
 150.0000 .0314
 160.0000 .0757
 170.0000 .2115
 180.0000 -.5375 -.1036 -.0551 -.0167 .0647 -.0281

DATE 24 MAR 74
TABULATED SOURCE DATA - 1A29/OA63

NAME: 00-030 PRESSIER VENTING - SHUTTLE ORBITER (REC012)

$$\text{ALPHA} (3) = .040 \quad \text{ALPHA} (1) = 0.475$$

DEPENDENT VARIABLE CP

SECTION 1108.411, MOI.226

[illegible]

250

[illegible]

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Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422
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60.000	-3494	-1790	-2044	-1751	-1639	(0000)	-10250	-10697	-0394
70.000	-3323	-2666	-1723	-1492	-1653				
80.000	-2784	-1623	-1263	-1237	-1791				
90.000									
100.000									
110.000									
120.000									
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380.000									
390.000									
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420.000									
430.000									
440.000									
450.000									
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580.000									
590.000									
600.000									
610.000									
620.000									
630.000									
640.000									
650.000									
660.000									
670.000									

$\text{HACH} (3) = .851 \quad \text{ALPHA} (3) = 10.690$

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

[illegible]

PMI	-0.0775	-.0341	-.1550	-.4565	-.6727	-.4983	-.2504	.0000	-.2393	-.2905	-.2395	-.2204	-.1735	.0000	-.1706
60.000	-.0464	-.0396	-.1391			-.4273	-.2680	-.2753	-.2610	-.2311	-.1982	-.2040	-.1481	-.1858	-.1320
70.000	-.0418	-.0625	-.1418			-.4442	-.3222	-.3364	-.2821	-.2504	-.2057	-.1662	-.1309	.0000	-.1051
80.000			-.1456			-.4582								.0000	
90.000						-.5534								-.0900	
100.000						-.6302								-.0707	
110.000						-.6543								-.0538	
120.000						-.6751								-.0514	
130.000						-.6700								-.0599	
140.000						-.6937	-.6937	-.5771	-.4766	-.3613	-.2516	-.1638	-.0983	-.0800	-.0617

K/L	Phi	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000			
.4500	.4880	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
.4600	.4980	.4960	.5150	.5340	.5560	.5710	.5900	.6080	.6270	.6460	.6640	.6830	.7050	.7270
.4700	.5080	.5060	.5250	.5440	.5660	.5810	.6000	.6180	.6370	.6560	.6740	.6930	.7150	.7370
.4800	.5180	.5160	.5350	.5540	.5760	.5910	.6100	.6280	.6470	.6660	.6840	.7030	.7250	.7470
.4900	.5280	.5260	.5450	.5640	.5860	.6010	.6200	.6380	.6570	.6760	.6940	.7130	.7350	.7570
.5000	.5380	.5360	.5550	.5740	.5960	.6110	.6300	.6480	.6670	.6860	.7040	.7230	.7450	.7670
.5100	.5480	.5460	.5650	.5840	.6060	.6210	.6400	.6580	.6770	.6960	.7140	.7330	.7550	.7770
.5200	.5580	.5560	.5750	.5940	.6160	.6310	.6500	.6680	.6870	.7060	.7240	.7430	.7650	.7870
.5300	.5680	.5660	.5850	.6040	.6260	.6410	.6600	.6780	.6970	.7160	.7340	.7530	.7750	.7970
.5400	.5780	.5760	.5950	.6140	.6360	.6510	.6700	.6880	.7070	.7260	.7440	.7630	.7850	.8070
.5500	.5880	.5860	.6050	.6240	.6460	.6610	.6800	.6980	.7170	.7360	.7540	.7730	.7950	.8170
.5600	.5980	.5960	.6150	.6340	.6560	.6710	.6900	.7080	.7270	.7460	.7640	.7830	.8050	.8270
.5700	.6080	.6060	.6250	.6440	.6660	.6810	.7000	.7180	.7370	.7560	.7740	.7930	.8150	.8370
.5800	.6180	.6160	.6350	.6540	.6760	.6910	.7100	.7280	.7470	.7660	.7840	.8030	.8250	.8470
.5900	.6280	.6260	.6450	.6640	.6860	.7010	.7200	.7380	.7570	.7760	.7940	.8130	.8350	.8570
.6000	.6380	.6360	.6550	.6740	.6960	.7110	.7300	.7480	.7670	.7860	.8040	.8230	.8450	.8670
.6100	.6480	.6460	.6650	.6840	.7060	.7210	.7400	.7580	.7770	.7960	.8140	.8330	.8550	.8770
.6200	.6580	.6560	.6750	.6940	.7160	.7310	.7500	.7680	.7870	.8060	.8240	.8430	.8650	.8870
.6300	.6680	.6660	.6850	.7040	.7260	.7410	.7600	.7780	.7970	.8160	.8340	.8530	.8750	.8970
.6400	.6780	.6760	.6950	.7140	.7360	.7510	.7700	.7880	.8070	.8260	.8440	.8630	.8850	.9070
.6500	.6880	.6860	.7050	.7240	.7460	.7610	.7800	.7980	.8170	.8360	.8540	.8730	.8950	.9170
.6600	.6980	.6960	.7150	.7340	.7560	.7710	.7900	.8080	.8270	.8460	.8640	.8830	.9050	.9270
.6700	.7080	.7060	.7250	.7440	.7660	.7810	.8000	.8180	.8370	.8560	.8740	.8930	.9150	.9370
.6800	.7180	.7160	.7350	.7540	.7760	.7910	.8100	.8280	.8470	.8660	.8840	.9030	.9250	.9470
.6900	.7280	.7260	.7450	.7640	.7860	.8010	.8200	.8380	.8570	.8760	.8940	.9130	.9350	.9570
.7000	.7380	.7360	.7550	.7740	.7960	.8110	.8300	.8480	.8670	.8860	.9040	.9230	.9450	.9670
.7100	.7480	.7460	.7650	.7840	.8060	.8210	.8400	.8580	.8770	.8960	.9140	.9330	.9550	.9770
.7200	.7580	.7560	.7750	.7940	.8160	.8310	.8500	.8680	.8870	.9060	.9240	.9430	.9650	.9870</

[illegible]

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/OA63

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (REC012)

MACH (3) = .851 ALPHA (5) = 14.920

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.2820	.3010	.3190	.3380	.3370	.3750	.3940	.4050	.4310
PHI															
60.000	-.0992	-.0849	-.1456												
70.000	-.0816	-.0550	-.1246												
80.000	-.0799	-.0227	-.1243												
90.000			-.1026	-.3776	-.6456	-.5000	-.2709	.0000	-.3305	-.4165	-.3365	-.2936	-.2497	.0000	-.2406
100.000					-.4433	-.2980	-.3315	-.3602	-.3349	-.2905	-.2905	-.2414	-.2676	-.1930	
110.000					-.4565	-.3211	-.4099	-.4285	-.3346	-.3030	-.2687	-.2299	.0000	-.1859	
120.000					-.4075									.0000	
130.000					-.5210									-.1368	
140.000					-.6345									-.1096	
150.000					-.6741									-.0972	
160.000					-.6808									-.0844	
170.000					-.6661									-.0989	
180.000					-.6895	-.6822	-.6286	-.5369	-.4162	-.2866	-.2111	-.1116	-.1060	-.0868	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.1832	-.1863	-.2039	-.1780	-.1755	-.2097	-.1877	-.2195	-.2568	-.3266	-.3907	-.4774	-.5618	.0000
100.000	-.1891	-.2093	-.1975	-.1711	-.1623	-.1821	-.1925	-.2005	-.1969	-.3119	-.3277	-.4346	-.4839	-.5154
110.000	-.1729	-.1560	-.1492	-.1587	-.1614	-.1665	-.1605	-.1742	-.1906	-.2250	-.2959	-.3652	-.3835	-.4128
120.000						-.1384							-.2901	
130.000						-.1651							-.2899	
140.000						-.1328							-.2487	
150.000						-.0888							-.2076	
160.000						-.0861							-.1931	
170.000						-.0943							-.2047	
180.000	-.0903	-.1042	-.0935	-.1076	-.1259	-.1148	-.1410	-.1603	-.1759	-.2113	-.2295	-.2374	-.2237	-.1699

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PHI									
60.000									
70.000									
80.000									
90.000	-.6449	-.4852	-.3972	-.3965	-.4541	.0000			
100.000	-.5063	-.4116	-.3128	-.3064	-.4212	-.5715			
110.000	-.3550	-.2758	-.2251	-.2265	-.3437	-.6076			
120.000						-.4656			
130.000						-.2263			
140.000						-.1053			
150.000						-.0200			
160.000						.0528			
170.000						.1624			
180.000	-.3662	-.1056	-.0487	-.0221	.0331	-.0025			

DATE 24 MAR 74

JAMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

(REC'D 12)

$$\text{MACH (3)} = .648 \quad \text{ALPHA (6)} = 17.000$$

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

Year	1940	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050	2060	2070	2080	2090
Population (millions)	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.3	3.6	3.9	4.2	4.5	4.8	5.1	5.4	5.7
GDP (trillion USD)	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0
Life expectancy (years)	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120
Urban population (%)	20	30	40	50	60	70	80	90	100	100	100	100	100	100	100	100
Renewable energy (%)	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85
CO2 emissions (Gt)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
Forest cover (%)	30	25	20	15	10	5	0	0	0	0	0	0	0	0	0	0
Water stress (%)	10	20	30	40	50	60	70	80	90	100	100	100	100	100	100	100
Healthcare spending (GDP %)	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35
Education spending (GDP %)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Research & Development (GDP %)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Unemployment (%)	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
Income inequality (Gini index)	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115
Government debt (GDP %)	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95
Public sector (GDP %)	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
Private sector (GDP %)	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10
Foreign trade (GDP %)	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85
Immigration (millions)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6
Emigration (millions)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6
Net migration (millions)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Population growth (%)	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0
Urban growth (%)	1.5	1.8	2.1	2.4	2.7	3.0	3.3	3.6	3.9	4.2	4.5	4.8	5.1	5.4	5.7	6.0
Rural growth (%)	0.5	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Population density (per sq km)	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400
Urban density (per sq km)	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
Rural density (per sq km)	50	40	30	20	10	5	0	0	0	0</						

PMI

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71

[illegible]

III

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442
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94171
94231
94291
94351
94411
94471

二

[illegible]

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A83

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER (RECO12)

MACH (4) = .952 ALPHA (1) = 6.536

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PHI

60.000 -.0300 -.0112 -.0954
70.000 .0122 .0136 -.0828
80.000 .0243 -.0187 -.0689
90.000 .0400 .0170 -.0453
100.000 .0600 .0350 -.0225
110.000 .0850 .0600 .0000
120.000 .1100 .0850 -.0225
130.000 .1350 .1100 -.0453
140.000 .1600 .1350 -.0689
150.000 .1850 .1600 -.0925
160.000 .2100 .1850 -.1161
170.000 .2350 .2100 -.1397
180.000 .2600 .2350 -.1633

X/L

PHI

90.000 .0188 .0233 .0234 .0338 .0361 .0186 .0232 .0127 .0087 .0608 .0930 .1668 .2476 .2650 .0000
100.000 .0288 .0318 .0299 .0368 .0395 .0206 .0095 .0025 .0005 .0684 .0813 .1481 .2116 .2377 .2777
110.000 .0468 .0567 .0531 .0463 .0411 .0238 .0193 .0118 .0021 .0306 .0797 .1270 .1619 .1981 .2240
120.000 .0648 .0747 .0711 .0643 .0591 .0418 .0388 .0321 .0248 .0684 .1079 .1564 .1981 .2377 .2777
130.000 .0828 .0927 .0891 .0823 .0771 .0608 .0588 .0521 .0448 .0844 .1239 .1724 .2139 .2539 .2939
140.000 .1008 .1107 .1071 .1003 .0951 .0788 .0768 .0701 .0628 .1024 .1419 .1904 .2319 .2719 .3119
150.000 .1188 .1287 .1251 .1183 .1131 .0968 .0948 .0881 .0808 .1204 .1599 .2084 .2499 .2899 .3299
160.000 .1368 .1467 .1431 .1363 .1311 .1148 .1128 .1061 .0988 .1384 .1779 .2264 .2679 .3079 .3479
170.000 .1548 .1647 .1611 .1543 .1491 .1328 .1308 .1241 .1168 .1564 .1959 .2444 .2859 .3259 .3659
180.000 .1728 .1827 .1791 .1723 .1671 .1508 .1488 .1421 .1348 .1744 .2139 .2624 .3039 .3439 .3839

X/L

PHI

60.000 .0227
70.000 -.0510 .0876 .0000
80.000 -.1136 .0127 .0233
90.000 -.1675 -.0296 -.0148
100.000 .0000
110.000 .3414
120.000 .4534
130.000 .1776
140.000 .0395
150.000 .1210
160.000 .1138
170.000 .1724
180.000 .1656

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC012)

MACH (4) = .953 ALPHA (2) = 8.692

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI														
60.000	-.0310	-.0002	-.0778											
70.000	.0027	.0225	-.0676											
80.000	.0202	.0032	-.0586											
90.000		-.0744	-.3700	-.6265	-.6372	-.5665	.0000	-.4954	-.3837	-.3970	-.2865	-.0682	.0000	-.0417
100.000					-.6367	-.6235	-.5644	-.5286	-.3998	-.3043	-.1493	-.0769	-.0600	-.0161
110.000					-.7328	-.6957	-.6382	-.4839	-.3837	-.3355	-.2470	-.0865	.0000	-.0196
120.000					-.7559								.0000	
130.000					-.7360								-.0833	
140.000					-.6514								-.1652	
150.000					-.6963								-.0602	
160.000					-.6590								-.0723	
170.000					-.7130								-.0641	
180.000					-.7137	-.6912	-.5236	-.4489	-.3610	-.2448	-.1118	-.0451	.0004	

X/L	.4500	.4660	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PMI															
90.000	-.0084	.0037	.0055	.0178	.0214	.0046	.0057	-.0086	-.0337	-.0924	-.1249	-.1928	-.2796	-.3210	.0000
100.000	.0009	.0130	.0110	.0226	.0280	.0083	-.0075	-.0164	-.0202	-.0965	-.1044	-.1725	-.2398	-.2715	-.3344
110.000	.0123	.0360	.0394	-.0051	.0301	.0173	-.0061	-.0048	-.0218	-.0521	-.0941	-.1465	-.1865	-.2270	-.2740
120.000					.0278									-.1721	
130.000					.0255									-.1494	
140.000					.0303									-.1357	
150.000					.0367									-.1314	
160.000					.0280									-.1327	
170.000					.0173									-.1359	
180.000	.0246	.0434	.0412	.0330	.0251	.0075	-.0093	-.0296	-.0508	-.0742	-.0788	-.1098	-.1298	-.1438	-.1149

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI									
60.000									
70.000									
80.000									
90.000	-.4293	-.3415	-.3091	-.3069	-.3572	.0000			
100.000	-.3400	-.3040	-.2483	-.2434	-.3194	-.4463			
110.000	-.2604	-.2197	-.1703	-.1739	-.2716	-.5281			
120.000					-.4687				
130.000					-.2050				
140.000					.0301				
150.000					.1275				
160.000					.1350				
170.000					.2090				
180.000	-.2555	-.0141	.0374	.1149	.1765				

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC012)

MACH (4) = .951 ALPHA (3) = 10.800

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0670	.1260	.1640	.2030	.2420	.2640	.2620	.3010	.3190	.3380	.3370	.3750	.3940	.4050	.4310
PHI															
60.000	-.0348	-.0001	-.0777												
70.000	-.0010	.0252	-.0612												
80.000	.0017	.0031	-.0486												
90.000		-.0456	-.3447	-.6099	-.5900	-.4943	.0000	-.3720	-.3919	-.3700	-.3413	-.3197	.0000	-.1503	
100.000				-.6099	-.5129	-.4288	-.3683	-.3716	-.3603	-.3623	-.2216	-.3056	-.1333		
110.000				-.6280	-.5339	-.4785	-.4396	-.3686	-.3492	-.3097	-.2255	.0000	-.1226		
120.000				-.5489									.0000		
130.000				-.5568									-.2621		
140.000				-.6025									-.2559		
150.000				-.5968									-.2628		
160.000				-.6477									-.3049		
170.000				-.6262									-.2804		
180.000				-.6352	-.6325	-.6189	-.5673	-.5262	-.4613	-.3989	-.3126	-.2603	-.1654		

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
-----	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

PHI															
90.000	-.1070	-.0682	-.0768	-.0491	-.0356	-.0273	-.0372	-.0428	-.0681	-.1253	-.1751	-.2481	-.3162	-.3716	.0000
100.000	-.1070	-.0930	-.0734	-.0459	-.0265	-.0404	-.0458	-.0485	-.0458	-.1363	-.1478	-.2213	-.2767	-.3090	-.3968
110.000	-.0894	-.0704	-.0464	-.0313	-.0258	-.0301	-.0286	-.0347	-.0512	-.0858	-.1358	-.1881	-.2211	-.2630	-.3216
120.000					-.0162									-.1963	
130.000					-.0174									-.1803	
140.000					.0082									-.1494	
150.000					.0282									-.1413	
.60.000					.0193									-.1358	
170.000					.0388									-.1449	
180.000	-.1239	-.0870	-.0223	-.0143	-.0123	-.0108	-.0212	-.0358	-.0597	-.0840	-.1036	-.1248	-.1471	-.1564	-.1494

X/L	.7290	.7470	.7670	.7860	.8030	.8290	.8620	.9000	.9400
-----	-------	-------	-------	-------	-------	-------	-------	-------	-------

PHI									
60.000							-.1398		
70.000							-.2262	-.0159	.0000
80.000							-.3272	-.0903	-.0208
90.000	-.4908	-.4243	-.4172	-.3948	-.4322	.0000	-.4307	-.1252	-.0547
100.000	-.4317	-.4040	-.3301	-.3003	-.3847	-.5019			
110.000	-.3247	-.3534	-.2260	-.2197	-.3270	-.5649			
120.000					-.4457				
130.000					-.1808				
140.000					-.0468				
150.000					.0159				
160.000					.0640				
170.000					.3357				
180.000	-.3151	-.0874	-.0118	.0272	.0922	.0822			

TABULATED SOURCE DATA - 1A29/OA63

DATE 24 MAR 74

JAMES EARL RAY PRESSURE VENTING - SHUTTLE ORBITER (REC012)

$$\text{MACH} (4) = .931 \quad \text{ALPHA} (4) = 12.070$$

SECTION (1)	USE/SLAGE	DEPENDENT VARIABLE CP
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
55	55	55
56	56	56
57	57	57
58	58	58
59	59	59
60	60	60
61	61	61
62	62	62
63	63	63
64	64	64
65	65	65
66	66	66
67	67	67
68	68	68
69	69	69
70	70	70
71	71	71
72	72	72
73	73	73
74	74	74
75	75	75
76	76	76
77	77	77
78	78	78
79	79	79
80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

X/L	.0079	.1260	.1640	.2030	.2420	.2840	.3020	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	-.0426	.0027	-.0393											
70.000	-.0159	.0250	-.0464											
80.000	-.0055	.0364	-.0376											
90.000			-.0243	-.3136	-.5089	-.3798	-.4846	-.3698	-.4299	-.4254	-.4150	-.3560	.0000	-.2249
100.000						-.3767	-.4964	-.4340	-.3985	-.3804	-.3824	-.3229	-.3106	-.1450
110.000						-.5902	-.5217	-.4686	-.4471	-.4498	-.3897	-.2921	.0000	-.1192
120.000						-.5484							.0000	
130.000						-.5803							-.2453	
140.000						-.6154							-.2437	
150.000						-.6140							-.2603	
160.000						-.6366							-.2672	
170.000						-.6350							-.2640	
180.000						-.6343	-.6499	-.6377	-.6095	-.5360	-.4803	-.3174	-.2807	-.1500
X/L	.4500	.4860	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6880	.7100
PHI														
90.000	-.1167	-.1042	-.1278	-.0777	-.0678	-.0848	-.0601	-.0781	-.1002	-.1572	-.2163	-.3046	-.3788	.0000
100.000	-.0938	-.1122	-.1010	-.0655	-.0456	-.0662	-.0659	-.0736	-.0695	-.1576	-.1802	-.2888	-.3346	-.4427
110.000	-.1001	-.0957	-.0740	-.0532	-.0474	-.0513	-.0432	-.0479	-.0641	-.0932	-.1635	-.2287	-.2672	-.3653
120.000						-.0367							-.2334	
130.000						-.0384							-.2239	
140.000						-.0250							-.1917	
150.000						.0251							-.1849	
160.000						.0256							-.1741	
170.000						.0071							-.1840	
180.000	-.1051	-.0742	-.0371	-.0170	-.0181	-.0159	-.0233	-.0377	-.0589	-.0894	-.1259	-.1583	-.2021	-.1889
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000							-.2196							
70.000							-.3522	-.1167	.0000					
80.000							-.4799	-.2119	-.0921					
90.000	-.5519	-.5168	-.4933	-.4555	-.4973	.0000								
100.000	-.4651	-.4474	-.3905	-.3630	-.4264	-.5758								
110.000	-.5749	-.3335	-.2683	-.2762	-.3739	-.6202								
120.000						-.4622								
130.000						-.1911								
140.000						-.0598								
150.000						.0160								
160.000						.0677								
170.000	-.3660	-.1157	-.0463</											

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A83

ANES 66-830 PRESSURE VENTING - SHUTTLE ORBITER (RECO12)

MACH (4) = .950 ALPHA (5) = 15.000

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP														
X/L		.0870	.1280	.1640	.2030	.2420	.2840	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI																
60.000		-.0574	-.0028	-.0534												
70.000		-.0366	.0189	-.0337												
80.000		-.0241	.0385	-.0208												
90.000			-.0033	-.2888	-.5583	-.5582	-.4886	.0000	-.4048	-.4379	-.4531	-.4698	-.4393	.0000	-.3715	-.2813
100.000						-.5578	-.5024	-.4517	-.4089	-.4334	-.4436	-.4662	-.4208	-.4508	-.2813	-.2281
110.000						-.5983	-.5192	-.4571	-.4653	-.4725	-.4599	-.4586	-.4006	.0000	.0000	
120.000						-.5719								-.2664		
130.000						-.5712								-.2490		
140.000						-.6190								-.2827		
150.000						-.6459								-.2515		
160.000						-.6620								-.2705		
170.000						-.6423								-.2513	-.1562	
180.000						-.6443	-.6791	-.6646	-.6238	-.5597	-.4843	-.4176	-.3145	-.2513	-.1562	
X/L		.4500	.4680	.4680	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI																
90.000		-.1893	-.0820	-.1839	-.1282	-.0746	-.1113	-.1108	-.1478	-.1514	-.2062	-.2708	-.3629	-.4455	-.4892	.0000
100.000		-.1358	-.0874	-.1101	-.1014	-.0528	-.0626	-.0997	-.1236	-.0929	-.1884	-.2159	-.3143	-.3820	-.4107	-.5040
110.000		-.1139	-.0814	-.0856	-.0741	-.0565	-.0633	-.0683	-.0799	-.0819	-.1180	-.1934	-.2822	-.3012	-.3432	-.4158
120.000							-.0441							-.2663		
130.000							-.0686							-.2608		
140.000							-.0214							-.2308		
150.000							.0221							-.2107		
160.000							.0210							-.2033		
170.000							.0105							-.2171		
180.000		-.1101	-.0720	-.0358	-.0193	-.0143	-.0164	-.0397	-.0598	-.0826	-.1180	-.1530	-.1857	-.2171	-.2408	-.2398
X/L		.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PHI																
60.000																
70.000																
80.000																
90.000		-.6201	-.5847	-.5983	-.5564	-.5775	.0000									
100.000		-.5979	-.5847	-.4968	-.4515	-.5158	-.6329									
110.000		-.4286	-.4102	-.3290	-.3376	-.4367	-.6726									
120.000							-.4880									
130.000							-.1960									
140.000							-.0622									
150.000							.0208									
160.000							.0855									
170.000							.1921									
180.000		-.4324	-.1943	-.0923	-.0312	.0477	.0511									

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD:2)

$$\text{NACH} (9) = 1.043 \quad \text{ALPHA} (1) = 6.569$$

SECTION (1) FUSELAGE

Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100																																																																																																																						
1987	1.280	1.640	2.030	2.420	2.840	3.310	3.800	4.310	4.850	5.410	5.990	6.590	7.210	7.850	8.510	9.190	9.890	10.610	11.350	12.110	12.890	13.690	14.510	15.350	16.210	17.090	17.990	18.910	19.850	20.810	21.790	22.790	23.810	24.850	25.910	26.990	28.090	29.210	30.350	31.510	32.690	33.890	35.110	36.350	37.610	38.890	40.190	41.510	42.850	44.210	45.590	46.990	48.410	49.850	51.310	52.790	54.290	55.810	57.350	58.910	60.490	62.090	63.710	65.350	67.010	68.690	70.390	72.110	73.850	75.610	77.390	79.190	81.010	82.850	84.710	86.590	88.490	90.410	92.350	94.310	96.290	98.290	100.310	102.350	104.410	106.490	108.590	110.710	112.850	115.010	117.190	119.390	121.610	123.850	126.110	128.390	130.690	133.010	135.350	137.710	140.090	142.490	144.910	147.350	149.810	152.290	154.790	157.310	159.850	162.410	164.990	167.590	170.210	172.850	175.510	178.190	180.890	183.610	186.350	189.110	191.890	194.690	197.510	200.350	203.210	206.090	208.990	211.910	214.850	217.810	220.790	223.790	226.810	229.850	232.910	236.010	239.150	242.310	245.490	248.690	251.910	255.150	258.410	261.690	264.990	268.310	271.650	275.010	278.390	281.790	285.210	288.650	292.110	295.590	299.090	302.610	306.150	309.710	313.290	316.890	320.510	324.150	327.810	331.490	335.190	338.910	342.650	346.410	350.190	353.990	357.810	361.650	365.510	369.390	373.290	377.210	381.150	385.110	389.090	393.090	397.110	401.150	405.210	409.290	413.390	417.510	421.650	425.810	429.990	434.190	438.410	442.650	446.910	451.190	455.490	459.810	464.150	468.510	472.890	477.290	481.710	486.150	490.610	495.090	499.590	504.110	508.650	513.210	517.790	522.390	526.910	531.490	536.090	540.710	545.350	550.010	554.690	559.390	564.110	568.850	573.610	578.390	583.190	588.010	592.850	597.710	602.590	607.490	612.410	617.350	622.310	627.290

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[illegible]

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PMI	-1.1700	-1.1226	-1.1154	-0.0769	-0.0236	0.0651	0.0741	0.0716	0.0378	0.0131	-0.0071	-0.0506	-0.1270	-0.1669	0.0000
90.000	-1.1945	-1.1182	-1.1048	-0.0684	-0.0129	0.0529	0.0448	0.0637	0.0686	0.0141	0.0108	-0.0390	-0.0917	-0.1247	-0.2063
100.000	-1.1224	-0.0949	-0.0876	-0.0474	-0.0123	0.0440	0.0223	0.0606	0.0652	0.0477	0.0232	-0.0125	-0.0519	-0.0936	-0.1561
110.000						0.0324								-0.0336	
120.000						0.0432								-0.0273	
130.000						0.0266								-0.0179	
140.000						0.0413								-0.0190	
150.000						0.0122								-0.0175	
160.000						0.0141								-0.0179	
170.000						0.0084								-0.0179	
180.000	-0.1110	-0.1004	-0.0817	-0.0783	-0.0426	0.0084	0.0192	0.0276	0.0272	0.0207	0.0194	0.0029	-0.0137	-0.0229	-0.0180
	-0.7290	-0.7470	-0.7570	-0.7850	-0.8030	-0.8290	-0.8620	-0.9000	-0.9400						

11

[illegible]

(REC 12)

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACH} (3) = 1.055 \quad \text{ALPHA} (2) = 0.745$$

SECTION (11)FUSELAGE

	1970	1980	1990	2000	2010	2020	2030	2040	2050	2060	2070	2080	2090	2100
I/L	.0070	.1200	.1640	.2030	.2420	.2640	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310

PHI

[illegible]

7/1

PVI

Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422
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III

[illegible]

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A83

(REC012)

AMES 64-830 PRESSURE VENTING - SHUTTLE ORBITER

MACH (3) = 1.044 ALPHA (3) = 10.820

DEPENDENT VARIABLE OF

SECTION (1) FUSELAGE

X/L	0.0870	.1280	.1640	.2030	.2420	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4010	.4310
PHI														
80.000	.0750	.1155	.0456											
70.000	.1087	.1400	.0797											
60.000	.1191	.1265	.0669											
50.000		.0879	-.1085	-.4404	-.4536	-.3943	.0000	-.3376	-.4073	-.4074	-.4221	-.4263	.0000	-.3367
40.000					-.4546	-.4437	-.4143	-.3907	-.4033	-.4200	-.4398	-.3987	-.3649	-.2690
30.000					-.5394	-.5098	-.4843	-.4635	-.4876	-.4981	-.3844	-.2929	.0000	-.2133
20.000					-.5790								.0000	
10.000					-.7739								-.1656	
0.000					-.8619								-.1400	
10.000					-.7467								-.1256	
20.000					-.5899								-.1270	
30.000					-.6257								-.1436	
40.000					-.6847	-.5848	-.4764	-.4332	-.3783	-.2942	-.2334	-.1817	-.1650	-.1300
X/L	.4900	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6860	.7100
PHI														
90.000	-.2696	-.2406	-.2370	-.1503	-.0023	.0616	.0142	.0780	.0558	.0136	-.0269	-.0949	-.2116	.0000
80.000	-.2336	-.2116	-.1896	-.1083	.0148	.0712	.0735	.0758	.0706	.0093	-.0091	-.0730	-.1364	-.2614
70.000	-.1817	-.1572	-.1756	-.0822	.0240	.0755	.0717	.0536	.0763	.0464	.0042	-.0406	-.1235	-.2073
60.000						.0467							-.0897	
50.000						.0476							-.0621	
40.000						.0706							-.0435	
30.000						.0936							-.0406	
20.000						.0616							-.0361	
10.000						.0554							-.0359	
0.000	-.1146	-.1076	-.0852	-.0566	-.0063	.0349	.0576	.0649	.0461	.0307	.0167	-.0070	-.0336	-.0769
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
80.000														
70.000														
60.000														
50.000	-.3666	-.3224	-.2969	-.2683	-.2375	.0000	-.4101	-.0676	.0620					
40.000	-.2921	-.3771	-.2204	-.1680	-.2500	-.3551								
30.000	-.3274	-.2680	-.1147	-.1076	-.1631	-.4407								
20.000						-.3626								
10.000						-.0766								
0.000						.1753								
10.000						.2612								
20.000						.2623								
30.000						.3036								
40.000	-.2263	.0080	.1275	.2023	.2749	.2266								

TABULATED SOURCE DATA - 1A29/OA63

DATE 24 MAR 74

(RECO12)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (S) = 1.031 ALPHA (S) = 15.130

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PMI

60.000 .0435 .1122 .0734
70.000 .0755 .1374 .1020
80.000 .0806 .1562 .1129
90.000 .1231 .1356 .13920
100.000 .4024 .3909 .3701 .3215 .3740 .3869 .4059 .4158 .0000 .4616
110.000 .4762 .4478 .4396 .4296 .4615 .4690 .5122 .4538 .0000 .2671
120.000 .5472
130.000 .7623
140.000 .9040
150.000 .8002
160.000 .6264
170.000 .6468
180.000 .7052 .5744 .4878 .4223 .3486 .2617 .2104 .1613 .1459 .1077

X/L

.4300 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PMI

90.000 .4097 .3238 .2671 .1696 .0156 .0472 .0218 .0454 .0815 .0163 .0745 .1937 .2742 .3199 .0000
100.000 .3140 .2496 .1841 .0878 .0583 .0778 .0475 .0043 .0163 .0078 .0310 .1426 .2200 .2522 .3434
110.000 .2512 .1576 .0902 .0145 .0743 .0956 .0773 .0420 .0269 .0374 .0102 .0845 .1437 .1268 .2841
120.000 .0801
130.000 .0246
140.000 .0908
150.000 .1221
160.000 .1206
170.000 .1168
180.000 .0775 .0659 .0238 .0042 .0042 .0361 .0092 .0388 .0681 .0928 .1338
X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

60.000 .2369
70.000 .3859 .1365 .0000
80.000 .4655 .2708 .0084
90.000 .4403 .4118 .4465 .4178 .4331 .0000
100.000 .3892 .4164 .3574 .3287 .3729 .4956
110.000 .3021 .3077 .2095 .2221 .3015 .5605
120.000 .4312
130.000 .2865
140.000 .2019
150.000 .2906
160.000 .3455
170.000 .4564
180.000 .3066 .2051 .0860 .1768 .2864 .2960

AMES 66-630 PRESSURF VENTING - SHUTTLE ORBITER

(RECO12)

MACH (5) = 1.049 ALPHA (6) = 17.100

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI														
60.000	.0311	.0981	.0686											
70.000	.0353	.1236	.1004											
80.000	.0432	.1175	.1164											
90.000		.1283	-.1203	-.3746	-.3832	-.3370	.0000	-.3128	-.3681	-.3875	-.4079	-.4120	.0000	-.4718
100.000					-.3827	-.3781	-.3587	-.3387	-.3614	-.3908	-.4480	-.4620	-.5129	-.4578
110.000					-.4598	-.4317	-.4288	-.4177	-.4534	-.4830	-.5142	-.5006	.0000	-.3161
120.000					-.5369								.0000	
130.000					-.7643								-.3336	
140.000					-.9306								-.1263	
150.000					-.8326								-.0790	
160.000					-.6481								-.0822	
170.000					-.6563								-.0824	
180.000					-.7162	-.5811	-.4895	-.4163	-.3426	-.2536	-.1938	-.1378	-.1202	-.0752
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6880	.7100
PHI														
90.000	-.4366	-.3627	-.2962	-.2070	-.0772	-.0035	-.0375	-.1346	-.1450	-.1877	-.2399	-.2981	-.3721	.0000
100.000	-.3575	-.2773	-.2000	-.1031	-.0040	.0553	.0248	-.0454	-.0398	-.1133	-.1596	-.2374	-.2950	-.4021
110.000	-.2327	-.1629	-.0943	-.0269	.0431	.0826	.0664	.0301	.0092	-.0283	-.0960	-.1201	-.1427	-.3151
120.000					.0750								-.1301	
130.000					-.0132								-.1519	
140.000					.0679								-.1180	
150.000					.1133								-.0897	
160.000					.1157								-.0806	
170.000					.1209								-.0933	
180.000	-.0536	-.0175	.0013	.0089	.0465	.0806	.0785	.0715	.0453	.0111	-.0232	-.0606	-.0941	-.1734
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000														
70.000														
80.000														
90.000	-.5086	-.4848	-.5334	-.5092	-.5277	.0000								
100.000	-.5150	-.5368	-.4453	-.4083	-.4557	-.5956								
110.000	-.3913	-.4772	-.2787	-.2942	-.3828	-.6466								
120.000					-.4749									
130.000					-.3635									
140.000					.1668									
150.000					.2922									
160.000					.3443									
170.000					.4427									
180.000	-.3618	-.2832	.0393	.1564	.2920	.3632								

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OA83

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC012)

MACH (4) = 1.100 ALPHA (1) = 6.642

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .1308 .1750 .1004
 70.000 .1694 .1922 .1225
 80.000 .1860 .1641 .1196
 90.000 .0997 -.1711 -.3895 -.4115 -.3505 .0000 -.3263 -.3372 -.3269 -.2039 .0000 -.1442
 100.000 -.4127 -.4083 -.3626 -.3366 -.3396 -.3361 -.2540 -.1373 -.1486 -.0991
 110.000 -.4949 -.4656 -.4364 -.4060 -.3828 -.2702 -.1758 -.1344 .0000 -.0720
 120.000 -.4976
 130.000 -.6649
 140.000 -.6920
 150.000 -.5744
 160.000 -.4583
 170.000 -.4881
 180.000 -.5321 -.4463 -.3587 -.3316 -.3080 -.2519 -.1785 -.0974 -.0435

X L .4500 .4690 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.0781 -.0238 .0139 .0976 .1514 .1681 .1737 .1664 .1521 .1163 .0823 .0198 -.0552 -.0894 .0000
 100.000 -.0656 -.0242 .0218 .1022 .1417 .1681 .1621 .1594 .1658 .1148 .0956 .0372 -.0155 -.0417 -.1166
 110.000 -.0379 .0092 .0324 .1038 .1371 .1683 .1652 .1716 .1672 .1422 .1049 .0564 .0210 -.0157 -.0658
 120.000 .1644
 130.000 .1546
 140.000 .1478
 150.000 .1567
 160.000 .1420
 170.000 .1343
 180.000 -.0229 .0003 .0104 .0416 .0960 .1241 .1266 .1320 .1297 .1200 .1018 .0774 .0534 .0701 .0575

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 .1049
 70.000 .0263 .1938 .0000
 80.000 -.0541 .1330 .1832
 90.000 -.1973 -.1097 -.0695 -.0782 -.1223 .0000
 100.000 -.1319 -.0969 -.0220 -.0161 -.0828 -.1928
 110.000 -.3853 -.0267 .0474 .0451 -.0427 -.2557
 120.000 .2050
 130.000 .0524
 140.000 .2304
 150.000 .2918
 160.000 .2791
 170.000 .3445
 180.000 -.0739 .1644 .2503 .2822 .3120 .2827

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECO12)

MACH (8) = 1.098 ALPHA (2) = 8.755

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI														
80.000	.1174	.1645	.1075											
90.000	.1920	.1926	.1373											
100.000	.1498	.1879	.1369											
110.000	.1270	.1428	.13696	-.3887	-.3328	.0000	-.2935	-.3248	-.3353	-.3418	-.3210	.0000	-.1897	
120.000				-.3898	-.3851	-.3490	-.3297	-.3272	-.3462	-.3213	-.2220	-.1958	-.1274	
130.000				-.4690	-.4488	-.4196	-.4025	-.4124	-.3472	-.2279	-.1691	.0000	-.0997	
140.000				-.4882								.0000		
150.000				-.6682								-.0874		
160.000				-.7228								-.0712		
170.000				-.6180								-.0639		
180.000				-.4853								-.0630		
190.000				-.5079								-.0691		
200.000				-.5565	-.4610	-.3863	-.3507	-.3124	-.2373	-.1870	-.1091	-.0803	-.0474	

X/L	.4500	.4880	.4680	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7130
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PHI

90.000	-.1112	-.0785	-.0450	.0503	.1466	.1650	.1769	.1788	.1441	.0984	.0405	-.0190	-.0846	-.1254
100.000	-.0883	-.0592	-.0190	.0909	.1443	.1605	.1622	.1655	.1506	.0947	.0616	.0036	-.0504	-.0811
110.000	-.0490	-.0190	.0182	.0907	.1389	.1617	.1722	.1686	.1566	.1238	.0768	.0285	-.0004	-.0440
120.000					.1303								-.0041	
130.000					.1595								.0303	
140.000					.1599								.0326	
150.000					.1740								.0397	
160.000					.1568								.0349	
170.000					.1400								.0301	
180.000	-.0170	-.0014	.0170	.0532	.1027	.1400	.1352	.1319	.1246	.1063	.0818	.0621	.0480	.0261

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI

80.000							.0116		
90.000							-.0970	.1494	.0000
100.000							-.1856	.0727	.1641
110.000	-.2425	-.1654	-.1549	-.1398	-.1683	.0000	-.2457	.0244	.1339
120.000	-.1863	-.1710	-.0837	-.0591	-.1237	-.2432			
130.000	-.1253	-.1343	-.0029	.0130	-.0807	-.3088			
140.000					-.2432				
150.000					.0327				
160.000					.2177				
170.000					.3032				
180.000					.3631				
190.000					.3870				
200.000	-.1239	.1394	.2125	.2757	.3204	.2933			

$\text{MACH} (0) = 1.102 \quad \text{ALPHA} (3) = 10.820$

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

{RECD:2}

SECTION (1) FUSELAGE

X/L	X/L	.0870	.1260	.1640	.2030	.2420	.2840	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI																
60.000	.1243	.1628	.1021													
70.000	.1542	.1980	.1499													
80.000	.1703	.1645	.1556													
90.000			.1566	-.1170	-.3470	-.3672	-.3124	.0000	-.2793	-.3165	-.3299	-.3256	-.3248	.0000	-.2392	
100.000						-.3662	-.3622	-.3321	-.3124	-.3148	-.3415	-.3616	-.3032	-.2754	-.1629	
110.000						-.4451	-.4250	-.4029	-.3834	-.4043	-.4096	-.2816	-.2059	.0000	-.1135	
120.000						-.4815								.0000		
130.000						-.6654								-.0788		
140.000						-.7448								-.0514		
150.000						-.6431								-.0300		
160.000						-.4937								-.0493		
170.000						-.5352								-.0668		
180.000						-.5896	-.4724	-.3952	-.3580	-.3083	-.2234	-.1565	-.1014	-.0888	-.0384	

$$\text{MACH} (6) = 1.100 \quad \text{ALPHA} (4) = 12.950$$

AMF'S 86-030 PRESSURE VENTING - SHUTTLE ORBITER (REC012)

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP														
X/L		.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI																
60.000	.1103	.1740	.1322													
70.000	.1441	.2092	.1607													
80.000	.1559	.2195	.1656													
90.000		.1742	-.0893	-.3342	-.3460	-.2887	.0000	-.2616	-.3060	-.3156	-.3258	-.3263	.0000			-.3232
100.000				-.3462	-.3351	-.3115	-.2938	-.3062	-.3266	-.3695	-.3613		-.3568			-.2134
110.000				-.4189	-.3905	-.3763	-.3669	-.3948	-.4107	-.3737	-.2552		.0000			-.1495
120.000					-.4720								.0000			
130.000						-.6676							-.0990			
140.000						-.7769								-.0518		
150.000						-.6784								-.0285		
160.000						-.5168								-.0297		
170.000						-.5463								-.0413		
180.000						-.5962	-.4824	-.4021	-.3512	-.2903	-.2035	-.1342	-.0829	-.0691		-.0316

[illegible][illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC012)

MACM (8) = 1.098 ALPHA (5) = 15.100

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP												
X/L		.0875	.1260	.1645	.2030	.2420	.2810	.3190	.3580	.3970	.5740	.3940	.4050	.4310
PHI														
60.000	.0958	.1666	.1591											
70.000	.1246	.2017	.1658											
80.000	.1346	.2204	.1749											
90.000		.1643	-.0677	-.3148	-.3229	-.2710	.0000	-.2460	-.2919	-.3093	-.3242	-.3274	.0000	-.3654
100.000				-.3237	-.3134	-.2928	-.2745	-.2916	-.3136	-.3547	-.3743	-.4133	-.2936	
110.000				-.3955	-.3690	-.3617	-.3505	-.3800	-.4041	-.4174	-.3400	.0000	-.1923	
120.000				-.4624								.0000		
130.000				-.6701								-.1465		
140.000				-.8047								-.0486		
150.000				-.7025								-.0179		
160.000				-.5373								-.0165		
170.000				-.5599								-.0249		
180.000				-.6138	-.4927	-.4075	-.3456	-.2735	-.1906	-.1285	-.0779	-.0625	-.0229	
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.3008	-.2208	-.1863	-.1324	-.0178	.1080	.1030	.0076	-.0233	.0111	.0022	-.1060	-.2040	.0000
100.000	-.2168	-.1687	-.1208	-.0616	.0604	.1367	.1159	.0501	.0259	.0448	.0369	-.0584	-.1476	-.2793
110.000	-.1371	-.0860	-.0369	-.0130	.0920	.1432	.1330	.0956	.0635	.0859	.0531	-.0128	-.0737	-.2132
120.000						.1233							-.0649	
130.000						.0717							-.0666	
140.000						.1369							-.0294	
150.000						.1663							-.0153	
160.000						.1661							-.0063	
170.000						.1589							-.0231	
180.000	-.0139	.0025	.0386	.0633	.0936	.1176	.1134	.1046	.0826	.0555	.0352	.0063	-.0221	-.0811
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000														
70.000														
80.000														
90.000	-.3805	-.3591	-.3862	-.3581	-.3688	.0000								
100.000	-.3662	-.4084	-.2900	-.2641	-.3061	-.4283								
110.000	-.2496	-.3433	-.1591	-.1552	-.2342	-.4820								
120.000						-.3498								
130.000						-.2245								
140.000						.2396								
150.000						.3333								
160.000						.3856								
170.000						.4902								
180.000	-.2476	-.1364	.1211	.2217	.3243	.3317								

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD12)

MACH (6) = 1.098 ALPHA (6) = 17.140

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP											
X/L		.0870	.1260	.1640	.2030	.2420	.2810	.3190	.3580	.3970	.4350	.4730	.5110
PM1													
60.000		.1092	.1743	.1413									
70.000		.1172	.1969	.1731									
80.000		.1277	.1920	.1842									
90.000			.1950	-.0477	-.2941	-.2994	-.2486	-.0000	-.2213	-.2765	-.2954	-.3138	-.3181
100.000					-.2984	-.2887	-.2708	-.2490	-.2698	-.2987	-.3501	-.3699	-.3876
110.000					-.3726	-.3413	-.3388	-.3287	-.3603	-.3898	-.4219	-.3975	-.2379
120.000					-.4513								.0000
130.000					-.6701								-.2432
140.000					-.8257								-.0508
150.000					-.7348								-.0100
160.000					-.5553								-.0041
170.000					-.5627								-.0094
180.000					-.6778	-.4831	-.3920	-.3170	-.2439	-.1526	-.1024	-.0543	-.0022
X/L		.4500	.4880	.4840	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540
PM1													
90.000		-.3519	-.2760	-.2269	-.1529	-.0950	.0412	.0525	-.0100	-.1134	-.1355	-.0938	-.1576
100.000		-.2707	-.2080	-.1253	-.0669	-.0257	.1230	.1040	.0509	-.0036	-.0676	-.0605	-.1251
110.000		-.1601	-.1012	-.0503	-.0232	.0390	.1369	.1317	.1019	.0315	.0246	-.0303	-.0808
120.000							.1369						-.0648
130.000							.0287						-.0894
140.000							.1099						-.0567
150.000							.1517						-.0392
160.000							.1537						-.0238
170.000							.1525						-.0355
180.000		.0039	.0233	.0349	.0422	.0670	.1085	.1052	.1013	.0819	.0334	.0329	-.0062
X/L		.7290	.7470	.7670	.7830	.8030	.8290	.8620	.9000	.9400			
PM1													
60.000													
70.000													
80.000													
90.000		-.4351	-.2736	-.4634	-.4412	-.4533	.0200						
100.000		-.4343	-.4636	-.4332	-.3447	-.3634	-.5075						
110.000		-.3463	-.4113	-.2322	-.2250	-.3034	-.5498						
120.000							-.3848						
130.000							-.2546						
140.000							.2127						
150.000							.3489						
160.000							.4034						
170.000							.4951						
180.000		-.2065	-.3322	-.1151	.2116	.3406	.3966						

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A83

AMES 86-830 PRESSURE VENTING - SHUTTLE ORBITER (RECO12)

MACH (P) = 1.149 ALPHA (1) = 6.543

SECTION (1) PUSELAGS DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.1094	.1669	.1082											
70.000	.1470	.1970	.1338											
80.000	.1831	.1708	.1344											
90.000		.1189		-.1341	-.3529	-.3766	-.3269	-.3083	-.3093	-.3107	-.2986	.0000	-.1873	
100.000					-.3812	-.3455	-.3137	-.3183	-.3181	-.2764	-.2080	-.2099	-.1593	
110.000					-.4575	.4347	-.3804	-.3800	-.2855	-.2155	-.1825	.0000	-.1340	
120.000					-.4601								-.1340	
130.000					-.6113								-.1362	
140.000					-.6386								-.1388	
150.000					-.5519								-.1463	
160.000					-.4440								-.1599	
170.000					-.4687								-.1703	-.1185
180.000					-.4879									

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5810	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1510	-.1275	-.1121	-.0902	-.0833	-.0797	-.0518	.0305	.0421	.0529	.0119	.0000	-.0562	-.0773	.0000
100.000	-.1384	-.1233	-.1070	-.0860	-.0716	-.0627	-.0592	.0269	.0770	.0639	.0329	.0061	-.0380	-.0452	-.0802
110.000	-.1270	-.0931	-.0750	-.0693	-.0594	-.0570	-.0246	.0355	.0368	.0655	.0438	.0147	.0014	.0002	-.0388
120.000						-.0391								.0463	
130.000						-.0206								.0649	
140.000						-.0516								.0655	
150.000						-.0316								.0535	
160.000						-.0444								.0802	
170.000						-.0504								.0604	
180.000	-.0995	-.0862	-.0754	-.0671	-.0612	-.0602	-.0444	-.0444	-.0444	.0081	.0309	.0333	.0556	.0589	

Phi									
60.000							.1625		.0000
70.000							.0970	.2383	.2321
80.000							.0343	.1845	.2135
90.000	-.1638	.0450	.0021	-.0375	-.0843	.0000	-.0270	.1405	
100.000	-.1828	-.1056	-.0478	.0019	-.0531	-.1401			
110.000	-.1050	-.0501	.0634	.0630	-.0191	-.2065			
120.000						-.1552			
130.000						.1258			
140.000						.2931			
150.000						.3343			
160.000						.3208			
170.000						.5651			
180.000	-.6312	.0394	.2377	.2716	.2855	.2514			

(RECD12)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (7) = 1.149 ALPHA (2) = 0.759

DEPENDENT VARIABLE CP

SECTION 1110000000

X/L .0870 .1280 .1840 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .0923 .1610 .1145
70.000 .1268 .1921 .1577
80.000 .1654 .1850 .1563
90.000 .1497 .11041 .3298 .3541 .3088 .0000 .2740 .3080 .3108 .3235 .3358 .0000 .2448
100.000 .3521 .3600 .3267 .3046 .3137 .3261 .3540 .2801 .2639 .1897
110.000 .4293 .4145 .3993 .3720 .3684 .3788 .2771 .2071 .0000 .1635
120.000 .4508
130.000 .6145
140.000 .6676
150.000 .5858
160.000 .4608
170.000 .4929
180.000 .5140 .4510 .3796 .3491 .3251 .2780 .2323 .1819 .1560 .1158

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6340 .6530 .6730 .6880 .7100

PHI

90.000 .1917 .1800 .1804 .1566 .1301 .1187 .0833 .0354 .0528 .0862 .0574 .0061 .0420 .0000
100.000 .1700 .1680 .1528 .1374 .1165 .0856 .0735 .0454 .0291 .0534 .0685 .0248 .0221 .0325 .1100
110.000 .1398 .1242 .1037 .1120 .0994 .0864 .0494 .0340 .0235 .0734 .0768 .0329 .0060 .0000 .0352
120.000 .0733
130.000 .0464
140.000 .0531
150.000 .0428
160.000 .0440
170.000 .0394
180.000 .0611 .0611 .0635 .0625 .0551 .0412 .0161 .0620 .0572 .0493 .0633 .0795

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000 .0910
70.000 .0011 .2062 .0000
80.000 .0744 .1503 .2217
90.000 .1996 .1313 .1076 .0937 .1164 .0000 .1631 .1089 .2001
100.000 .1648 .1299 .0796 .0232 .0774 .1812
110.000 .0442 .0435 .0361 .0416 .0378 .2471
120.000 .1941
130.000 .1182
140.000 .2871
150.000 .3700
160.000 .3561
170.000 .4288
180.000 .0797 .1415 .2265 .2840 .3446 .3315

TABULATED SOURCE DATA - 1A29/OA63

DATE 24 MAR 74

(RECD12)

WFFS 04-030 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACM} (7) = 1.191 \quad \text{ALPHA} (3) = 10.900$$

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

M/L	.0870	.1200	.1640	.2030	.2420	.2840	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
PW1														
60.000	.0661	.1491	.1233											
70.000	.1023	.1890	.1704											
80.000	.1219	.1914	.1765											
90.000			.1775	-.0743	-.3113	-.3331	-.2896	.0000	-.2636	-.3044	-.3036	-.3184	-.3209	-.3264
100.000						-.3345	-.3371	-.3102	-.2954	-.3068	-.3206	-.3325	-.3635	-.3593
110.000						-.4064	-.3934	-.3797	-.3591	-.3807	-.3944	-.3601	-.2767	-.1941
120.000						-.4372							.0000	.0000
130.000						-.6096							-.1487	
140.000						-.6874							-.1291	
150.000						-.8036							-.1165	
160.000						-.4682							-.1179	
170.000						-.5039							-.1374	
180.000						-.5351	-.4691	-.3936	-.3559	-.3275	-.2740	-.2207	-.1716	-.1125

X/L	.4500	.4600	.4800	.5050	.5240	.5460	.5610	.5800	.5960	.6170	.6360	.6540	.6730	.6980	.7100
PW1															
90.000	-.2464	-.2290	-.2241	-.1970	-.1820	-.1698	-.1225	-.1167	-.0651	.0028	.0441	-.0119	-.0714	-.1239	.0000
100.000	-.2113	-.2003	-.1870	-.1728	-.1574	-.1322	-.1090	-.0874	-.0519	-.0164	.0793	.0120	-.0347	-.0770	-.1264
110.000	-.1765	-.1550	-.1396	-.1372	-.1329	-.1242	-.0842	-.0575	-.0491	.0191	.0896	.0453	-.0031	-.0445	-.0749
120.000						-.1104					.0162			.0162	
130.000						-.0868								.0568	
140.000						-.0649								.0585	
150.000						-.0345								.0722	
160.000						-.0074								.0506	
170.000						-.0565								.0482	
180.000	-.0966	-.0815	-.0632	-.0636	-.0604	-.0708	-.0774	-.0792	-.0764	-.0605	-.0191	.0522	-.0041	.0561	.0207
	-.2290	-.2470	-.2670	.7830	.8030	.8290	.8620	.9000	.9400						

1/L	.7290	.7470	.7670	.7830	.8030	.8290	.8620	.9000	.9400
PMI									
60,000							.0164		
70,000							-.1063	.1686	.0000
80,000							-.2063	.1015	.2047
90,000							-.2529	.0196	.1631
100,000	-.2085	-.1389	-.1876	-.1510	-.1801	.0000			
110,000	-.1906	-.2235	-.1756	-.0690	-.1199	-.2269			
120,000	-.0971	-.1490	.0046	.0016	-.0694	-.2947			
130,000						-.2376			
140,000						.0773			
150,000						.2692			
160,000						.3601			
170,000						.3956			
180,000						.4799			
190,000						.5150			
200,000	-.0978	-.0274	.2247	.2942	.3692				

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A83

AWES 64-630 PRESSURE VENTING - SHUTTLE ORBITER (RECORD)

MACH (7) = 1.148 ALPHA (4) = 12.920

SECTION (11) FUSELAGE DEPENDENT VARIABLE CP

X/L	0.070	.1260	.1840	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
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PHI

60.000	.0229	.1020	.1480												
70.000	.0299	.1373	.1817												
80.000	.0394	.1995	.1894												
90.000		.1944	-.0577	-.3023	-.3236	-.2745	.0000	-.2520	-.2940	-.3062	-.3222	-.3283	.0000	-.3661	
100.000					-.2250	-.3180	-.3000	-.2803	-.2968	-.3160	-.3602	-.3766	-.4147	-.3473	
110.000						-.3926	-.3742	-.3628	-.3477	-.3734	-.3951	-.4216	-.3784	.0000	-.2494
120.000						-.4369								.0000	
130.000						-.6229								-.1597	
140.000						-.7260								-.1263	
150.000						-.6456								-.1123	
160.000						-.5064								-.1141	
170.000						-.5341								-.1253	
180.000						-.5742	-.4872	-.4097	-.3724	-.3335	-.2745	-.2184	-.1687	-.1304	-.1190

X/L

.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PHI

90.000	-.3471	-.2930	-.2593	-.2302	-.2219	-.2140	-.1892	-.1165	.0492	.1086	.0722	-.0518	-.0774	-.1236	.0000
100.000	-.2731	-.2507	-.2227	-.1898	-.1827	-.1629	-.1299	-.0801	.0526	.1036	.0914	.0044	-.0278	-.0696	-.1636
110.000	-.2132	-.1714	-.1634	-.1582	-.1442	-.1401	-.0953	-.0427	.0631	.1127	.0948	.0329	.0137	-.0274	-.1108
120.000						-.1157								.0149	
130.000						-.1075								.0364	
140.000						-.0443								.0679	
150.000						-.0108								.0697	
160.000						-.0289								.0813	
170.000						-.0230								.0485	
180.000	-.1088	-.1015	-.0908	-.0944	-.0869	-.0529	-.0689	-.0549	-.0455	-.0056	.0390	.0426	.0297	.0184	-.0117

X/L

.7280	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI

60.000						-.0473		
70.000						-.1953	.0886	.0000
80.000						-.2639	-.0312	.1686
90.000	-.2511	-.2116	-.2356	-.1973	-.2368	.0000	-.3285	-.2279
100.000	-.2269	-.2622	-.1592	-.1276	-.1681	-.2826		
110.000	-.1366	-.1844	-.0276	-.0320	-.1012	-.3352		
120.000						-.2756		
130.000						-.0872		
140.000						.0095		
150.000						.3831		
160.000						.4171		
170.000						.5165		
180.000	-.1316	.0000	.2204	.2930	.3697	.3400		

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0A83

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AMES 86-830 PRESSURE VENTING - SHUTTLE ORBITER

-REC012)

MACH (P) = 1.151 ALPHA (S) = 15.000

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0070 .1200 .1640 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4090 .4310

PMI

60.000 .0006 .0508 .1486
 70.000 .0006 .0875 .2117
 80.000 .0111 .1132 .2063
 90.000 .2182 -.0267 -.2749 -.2973 -.2556 .0000 -.2416 -.2798 -.3013 -.3117 -.3250 .0000 -.3935
 100.000 -.2969 -.2930 -.2742 -.2602 -.2794 -.3043 -.3701 -.4156 -.3924
 110.000 -.3602 -.3427 -.3301 -.3666 -.3816 -.4100 -.4247 .0000
 120.000 -.4207
 130.000 -.6131
 140.000 -.7385
 150.000 -.6591
 160.000 -.5157
 170.000 -.5321
 180.000 -.5834

X/L

.4900 .4680 .4660 .4030 .5240 .5460 .5610 .5830 .5980 .6170 .6360 .6540 .6730 .6980 .7100

PMI

90.000 -.3670 -.3466 -.3016 -.2395 -.2302 -.2213 -.1869 -.1805 -.1536 .0241 .0563 -.1115 -.1866 -.1135 .0000
 100.000 -.3525 -.2772 -.2502 -.2036 -.1963 -.1700 -.1667 -.1341 .0117 .0905 .0828 -.0219 -.0785 -.0814 -.2152
 110.000 -.2339 -.1866 -.1592 -.1503 -.1373 -.1242 -.1013 -.0597 -.0256 .1271 .1090 .0440 -.0243 -.0858 -.1453
 120.000 -.1015
 130.000 -.1284
 140.000 -.0925
 150.000 -.0553
 160.000 -.0448
 170.000 -.0394
 180.000 -.0571

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

60.000
 70.000
 80.000
 90.000
 100.000
 110.000
 120.000
 130.000
 140.000
 150.000
 160.000
 170.000
 180.000

MACH (7) = 1.149 ALPHA (6) = 17.250

(REC'D12)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

SECTION : 114-SELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
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FBI

60,000	- .0209	.0967	.0908
70,000	- .0460	.0358	.2171
80,000	- .0490	.0564	.2270
90,000			.2258
100,000			
110,000			
120,000			
130,000			
140,000			
150,000			
160,000			
170,000			
180,000			

xx/7

FBI

90,000	-.3602	-.3796	-.3193	-.2779	-.2527	-.1060	-.1805	-.2563	-.1643	-.0184	-.1299	-.1811	-.2773	-.2903	.0000
100,000	-.3831	-.3591	-.2998	-.2361	-.1785	-.1831	-.1204	-.1573	.0470	.0292	-.0278	-.0776	-.1483	-.1659	-.2870
110,000	-.2970	-.2300	-.1829	-.1572	.0614	.0318	-.0024	-.0714	.0460	.1454	.0533	-.0110	-.0448	-.1069	-.1905
120,000					.0863								-.0092	-.0092	
130,000						-.1669							-.0188		
140,000						-.0446							.0314		
150,000						-.0670							.0626		
160,000						.0207							.0691		
170,000						.0112							.0861		
180,000	-.0394	-.0362	-.0407	-.0104	.1343	-.0254	-.0472	.0219	.0944	.1365	.1314	.0885	.0709	.0642	-.0003

7/2

III

[illegible]

.4888

AMES 06-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD12)

MACH (8) = 1.250 ALPHA (1) = 6.529

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4030	.4310
PHI															
80.000	.0469	.0767	.0871												
90.000	.0705	.1014	.1579												
100.000	.0769	.1317	.1645												
110.000		.1547	-.0601	-.2757	-.3090	-.2797	.0000	-.2398	-.2675	-.2665	-.2717	-.2588	.0000	-.2053	
120.000					-.3083	-.3236	-.3004	-.2724	-.2767	-.2766	-.2866	-.2255	-.2201	-.1692	
130.000					-.3842	-.3689	-.3609	-.3321	-.3390	-.3135	-.2280	-.1807	.0000	-.1471	
140.000					-.3815								-.1520	.0000	
150.000					-.5146								-.1632		
160.000					-.5401								-.1768		
170.000					-.4845								-.1851		
180.000					-.4204								-.1943		
					-.4149								-.1931	-.1481	
					-.4107	-.3752	-.3242	-.2928	-.2836	-.2604	-.2363	-.2084	-.1931	-.1481	
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100	
PHI															
90.000	-.1640	-.1585	-.1613	-.1367	-.1204	-.0969	-.0779	-.0424	.0225	.0260	-.0311	-.0815	-.0943	.0000	
100.000	-.1355	-.1543	-.1427	-.1274	-.1068	-.0779	-.0798	-.0708	.0037	.0324	-.0131	-.0557	-.0529	-.0926	
110.000	-.1355	-.1210	-.1082	-.1053	-.0890	-.0585	-.0611	-.0366	.0088	.0223	.0020	-.0232	-.0338	-.0630	
120.000						-.0473							-.0129		
130.000						-.0643							.0037		
140.000						-.0680							.0020		
150.000						-.0511							-.0011		
160.000						-.0517							.0020		
170.000						-.0512							.0080		
180.000	-.1268	-.1072	-.0861	-.0839	-.0802	-.0750	-.0769	-.0754	-.0722	-.0622	-.0523	-.0372	.0037	.0163	
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PHI															
80.000							.0058								
90.000							-.0852	.1135	.0000						
100.000							-.1561	.0022	.1723						
110.000								-.1941	.1494						
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000	-.0869	-.0728	.1803	.2030	.2209	.1692									

TABULATED SOURCE DATA - 1A29/OA63

DATE 24 MAR 74

(REC'D 12)

JAMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACH} (0) = 1.291 \quad \text{ALPHA} (4) = 12.910$$

SECTION / USEPAGE

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI															
60.000	.0247	.0274	.0266												
70.000	.0183	.0353	.0394												
80.000	.0179	.0451	.0938												
90.000			.1982	.0110	-.2285	-.2380	-.2265	.0000	-.2087	-.2447	-.2529	-.2694	-.2748	.0000	-.3321
100.000						-.2561	-.2669	-.2493	-.2326	-.2462	-.2679	-.3016	-.3114	-.3480	-.3374
110.000						-.3154	-.3097	-.3062	-.2947	-.3168	-.3331	-.3509	-.3641	.0000	-.2811
120.000						-.3499								.0000	
130.000						-.5180								-.1763	
140.000						-.6052								-.1538	
150.000						-.5456								-.1375	
160.000						-.4490								-.1388	
170.000						-.4543								-.1374	
180.000						-.4793	-.4297	-.3664	-.3377	-.3160	-.2740	-.2369	-.1980	-.1815	-.1427
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	-.3176	-.3239	-.2965	-.2353	-.2044	-.2085	-.1834	-.1763	-.1685	-.1673	-.1187	-.1172	-.1678	-.2039	.0000
100.000	-.3180	-.2775	-.2289	-.1930	-.1726	-.1756	-.1623	-.1474	-.1348	-.1432	-.0969	-.0897	-.1307	-.1416	-.1998
110.000	-.2432	-.2015	-.1643	-.1544	-.1457	-.1408	-.1130	-.1091	-.1163	-.0844	-.0840	-.0708	-.0895	-.1002	-.1423
120.000						-.1232								-.0807	
130.000						-.1064								-.0736	
140.000						-.0703								-.0397	
150.000						-.0453								-.0270	
160.000						-.0485								-.0242	
170.000						-.0638								-.0503	
180.000	-.1285	-.1217	-.1085	-.1100	-.1050	-.0953	-.0961	-.1010	-.1028	-.1154	-.1059	-.0989	-.0845	-.0635	-.0649
X/L	.7290	.7470	.7670	.7830	.8030	.8290	.8620	.9000	.9400						
PMI															
60.000							-.1620								
70.000							-.2673	-.1557	.0000						
80.000							-.3161	-.3409	.0165						
90.000	-.2676	-.1970	-.2341	-.2534	-.2541	.0000	-.3373	-.3532	-.0829						
100.000	-.2619	-.2769	-.2889	-.1699	-.1862	-.2730									
110.000	-.1775	-.2346	-.1059	-.0727	-.1178	-.2125									
120.000						-.0185									
130.000						.3223									
140.000						.4203									
150.000						.4613									
160.000						.5070									
170.000						.5179									
180.000	-.1566	-.1824	.0564	.2293	.3310	.3179									

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A03

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER (RECO12)

MACH (8) = 1.250 ALPHA (5) = 15.010

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4090 .4310

PHI

60.000 .0151 .0071 -.0072
 70.000 -.0067 .0147 .0293
 80.000 -.0090 .0176 .0523
 90.000 .0247 -.2153 -.2412 -.1780 .0000 .1947 -.2060 -.2229 -.2378 -.2491 .0000 -.2982
 100.000 -.2283 -.2371 -.2332 -.2189 -.2361 -.2530 -.2706 -.2881 -.3377 -.3086
 110.000 -.2987 -.2923 -.2867 -.2817 -.2919 -.2963 -.3236 -.3484 .0000
 120.000 -.3395
 130.000 -.5140
 140.000 -.6193
 150.000 -.5593
 160.000 -.4530
 170.000 -.4549
 180.000 -.4971 -.4429 -.3756 -.3444 -.3189 -.2721 -.2375 -.1936 -.1638 -.1263

X/L

PHI

60.000 -.2854 -.3096 -.3181 -.2818 -.2588 -.2626 -.2296 -.2428 -.2269 -.2347 -.2294 -.2268 -.2501 -.2650 .0000
 70.000 -.3156 -.3160 -.2731 -.2326 -.2130 -.2157 -.2075 -.1931 -.1838 -.1919 -.1639 -.1618 -.1916 -.2367
 80.000 -.2745 -.2227 -.1936 -.1815 -.1701 -.1688 -.1518 -.1344 -.1308 -.1245 -.1278 -.1178 -.1222 -.1398 -.1672
 90.000 -.1253
 100.000 -.1600
 110.000 -.0901
 120.000 -.0460
 130.000 -.0448
 140.000 -.0477
 150.000 -.0813
 160.000 -.0898
 170.000 -.1063
 180.000 -.1083 -.1063 -.1056 -.1056 -.1056 -.0972 -.0987 -.0922 -.0903 -.1064

X/L

PHI

60.000 -.1869
 70.000 -.3152 -.2212 .0000
 80.000 -.3961 -.3906 -.0794
 90.000 -.3201 -.2369 -.3146 -.3250 -.3227 .0000
 100.000 -.3294 -.3461 -.3404 -.2411 -.2460 -.3186
 110.000 -.2211 -.2956 -.1834 -.1201 -.1616 -.3384
 120.000 -.2271
 130.000 -.1383
 140.000 .3280
 150.000 .4324
 160.000 .5036
 170.000 .5510
 180.000 -.1953 -.2316 -.0749 .2490 .3504 .4003

AMES 68-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECO12)

$$\text{MACM} (0) = 1.249 \quad \text{ALPHA} (6) = 17.130$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI															
60.000	.0010	.0073	.0036												
70.000	-.0342	-.0059	.0355												
80.000	-.0338	.0061	.0616												
90.000			.0966	.0562	-.1837	-.2075	-.1630	.0000	-.1559	-.2033	-.2209	-.2395	-.2455	.0000	-.3136
100.000					-.2096	-.2096	-.2016	-.1983	-.1753	-.1962	-.2202	-.2697	-.2867	-.3319	-.3286
110.000					-.2612	-.2612	-.2482	-.2451	-.2372	-.2716	-.2965	-.3245	-.3453	.0000	-.3678
120.000					-.3177									.0000	
130.000					-.4962									-.2540	
140.000					-.6319									-.1560	
150.000					-.5772									-.1031	
160.000					-.4519									-.0946	
170.000					-.4455									-.1045	
180.000					-.5020	-.4302	-.3648	-.3270	-.2850	-.2440	-.1981	-.1519	-.1131	-.1370	-.1107
X/L	.4500	.4880	.4880	.5050	.5240	.5460	.5610	.5800	.5960	.6170	.6380	.6540	.6730	.6880	.7100
PMI															
90.000	-.3026	-.3234	-.3369	-.3379	-.3203	-.3047	-.2814	-.2830	-.2674	-.2725	-.2677	-.2652	-.3063	-.3262	.0000
100.000	-.3367	-.3610	-.3490	-.2991	-.2529	-.2401	-.2222	-.2115	-.1834	-.2107	-.1750	-.1721	-.2031	-.2163	-.2763
110.000	-.3552	-.2969	-.2479	-.2209	-.1990	-.1869	-.1689	-.1488	-.1446	-.1304	-.1312	-.1133	-.1146	-.1331	-.1868
120.000					-.1464									-.0693	
130.000					-.2270									-.1037	
140.000					-.1346									-.0871	
150.000					-.0776									-.0716	
160.000					-.0700									-.0632	
170.000					-.0690									-.0639	
180.000	-.0936	-.0905	-.0901	-.0833	-.0833	-.0925	-.1048	-.1059	-.1163	-.1243	-.1203	-.1131	-.0964	-.0876	-.1086
X/L	.7290	.7470	.7670	.7800	.8030	.8290	.8620	.8730	.9400						
PMI															
60.000							-.2107								
70.000							-.3390	-.2203	.0000						
80.000							-.5008	-.4370	-.1373						
90.000	-.4040	-.3639	-.4025	-.4177	-.4082	.0000	-.4608	-.4867	-.1846						
100.000	-.3542	-.3654	-.4305	-.3101	-.3223	-.3922									
110.000	-.2204	-.3082	-.2221	-.1733	-.2333	-.4049									
120.000					-.2323	-.2323									
130.000					-.1066										
140.000					.2646										
150.000					.4383										
160.000					.5307										
170.000					.5814										
180.000	-.2145	-.2227	-.0959	.2478	.3559	.4643									

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A83

AMES 86-830 PRESSURE VENTING - SHUTTLE ORBITER

(RECD12)

MACH (8) = 1.400 ALPHA (1) = 6.438

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4310
PHI														
90.000	.0484	.0548	.0192											
70.000	.0875	.0649	.0440											
50.000	.0766	.0718	.0962											
30.000		.1435	.0128	-.0258	-.2343	-.2196	.0000	-.1908	-.2133	-.2150	-.2206	-.2171	.0000	-.2055
100.000					-.2543	-.2549	-.2435	-.2200	-.2241	-.2287	-.2422	-.2216	-.2179	-.1369
110.000					-.3176	-.3012	-.2973	-.2757	-.2745	-.2659	-.2347	-.1871	.0000	-.1370
120.000					-.3111								.0000	
130.000					-.4075								-.1480	
140.000					-.4292								-.1636	
150.000					-.3946								-.1855	
160.000					-.3705								-.2049	
170.000					-.3565								-.2051	
180.000					-.3341	-.3084	-.2784	-.2561	-.2420	-.2254	-.2212	-.2040	-.1944	-.1733

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1378	-.1447	-.1447	-.1296	-.1766	-.1283	-.1110	-.0981	-.0808	-.0526	-.0138	-.0289	-.0593	-.0838	.0000
100.000	-.1405	-.1427	-.1311	-.1217	-.1146	-.1176	-.1099	-.0950	-.0686	-.0631	-.0208	-.0179	-.0361	-.0544	-.0919
110.000	-.1255	-.1167	-.1079	-.1062	-.1034	-.0938	-.0867	-.0795	-.0631	-.0509	-.0299	-.0129	-.0160	-.0323	-.0642
120.000					-.0646									-.0234	
130.000					-.0672									-.0243	
140.000					-.0644									-.0346	
150.000					-.0531									-.0477	
160.000					-.0620									-.0555	
170.000					-.0734									-.0568	
180.000	-.1933	-.1369	-.1107	-.1062	-.0914	-.0847	-.0799	-.0793	-.0762	-.0740	-.0728	-.0717	-.0632	-.0641	-.0437

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
-----	-------	-------	-------	-------	-------	-------	-------	-------	-------

PHI									
90.000									
70.000									
50.000									
30.000	-.1214	-.0180	-.0666	-.0902	-.0855	.0000			
100.000	-.1261	-.1322	-.1401	-.0265	-.0395	-.1059			
110.000	-.1010	-.1159	-.0133	.0315	-.0019	-.1225			
120.000						-.0425			
130.000						.1984			
140.000						.3097			
150.000						.2933			
160.000						.2766			
170.000						.2784			
180.000	-.0737	-.0723	.1440	.1676	.1889	.1365			

AMES 66-610 PRESSURE VENTING - SHUTTLE ORBITER

(RECD12)

$$\text{MACM} (9) = 1.455 \quad \text{ALPHA} (2) = 0.656$$

SECTION (1) FUSELAGE

K/L	.0870	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI															
60.000	.0522	.0466	.0046												
70.000	.0604	.0566	.0271												
80.000	.0639	.0665	.0535												
90.000			.1463	.0100	-.1601	-.2164	-.2035	.0000	-.1760	-.2082	-.2080	-.2165	-.2110	.0000	-.2391
100.000					-.2154	-.2154	-.2363	-.2202	-.2046	-.2128	-.2222	-.2440	-.2415	-.2611	-.2056
110.000					-.2879	-.2879	-.2769	-.2771	-.2584	-.2664	-.2731	-.2735	-.2297	.0000	-.1669
120.000					-.2936	-.2936									
130.000					-.4119	-.4119								-.1489	
140.000					-.4470	-.4470								-.1585	
150.000					-.4121	-.4121								-.1743	
160.000					-.3614	-.3614								-.1858	
170.000					-.3744	-.3744								-.2041	
180.000					-.3540	-.3540	-.3272	-.2954	-.2721	-.2599	-.2444	-.2308	-.2110	-.2016	-.1651

[illegible][illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECO12)

MACH (9) = 1.400 ALPHA (3) = 10.870

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1200 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PMI

60.000 .0481 .0362 -.0034
 70.000 .0437 .0444 .0137
 80.000 .0486 .0503 .0382
 90.000 .1036 .0306 -.1711 -.2033 -.1830 .0000 -.1664 -.1973 -.1969 -.2032 -.2063 .0000 -.2490
 100.000 .2616 -.2180 -.2039 -.2058 -.2058 -.2130 -.2381 -.2389 -.2697 -.2542
 110.000 .2613 -.2561 -.2583 -.2490 -.2596 -.2720 -.2794 -.2796 .0000 -.2119
 120.000 .2772
 130.000 .4157
 140.000 .4637
 150.000 .4249
 160.000 .3692
 170.000 .3617
 180.000 .3709 -.3430 -.3067 -.2825 -.2722 -.2527 -.2366 -.2054 -.2002 -.1515

X/L

PMI

90.000 -.2398 -.2463 -.2333 -.1954 -.1877 -.1914 -.1663 -.1669 -.1557 -.1466 -.1055 -.1096 -.1341 .0000
 100.000 -.2402 -.2225 -.1995 -.1746 -.1567 -.1608 -.1564 -.1472 -.1277 -.1380 -.0983 -.0753 -.0810 -.0985 -.1537
 110.000 -.1942 -.1716 -.1563 -.1424 -.1316 -.1303 -.1221 -.1153 -.1068 -.1009 -.0961 -.0700 -.0532 -.0687 -.1126
 120.000 .1082
 130.000 .0847
 140.000 .0693
 150.000 .0560
 160.000 .0645
 170.000 .0777
 180.000 -.1327 -.1194 -.1083 -.1052 -.0990 -.0906 -.0919 -.0849 -.0847 -.0799 -.0832 -.0856 -.0849

X/L

PMI

60.000
 70.000
 80.000
 90.000 -.1980 -.1093 -.1865 -.1991 -.1739 .0000
 100.000 -.1969 -.2066 -.2247 -.1248 -.1236 -.1712
 110.000 -.1510 -.1753 -.0931 -.0374 -.0674 -.1924
 120.000 .1016
 130.000 .1344
 140.000 .3377
 150.000 .4305
 160.000 .4512
 170.000 .4400
 180.000 -.1303 -.1417 .0161 .1610 .2413 .2464

DATE 24 MAR 74 TABULATED SOURCE DATA - 1429/0463

AKES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECO12)

MACH (S) = 1.401 ALPHA (S) = 14.870

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0670	.1290	.1640	.2030	.2420	.2640	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.0302	.0120	-.0138											
70.000	.0035	.0215	.0021											
80.000	.0081	.0170	.0190											
90.000		.0499	.0397	-.1454	-.1803	-.1661	.0000	-.1478	-.1770	-.1812	-.1960	-.2019	.0000	-.2466
100.000					-.1786	-.1947	-.1936	-.1689	-.1740	-.1861	-.2204	-.2329	-.2653	-.2604
110.000					-.2272	-.2304	-.2335	-.2215	-.2352	-.2476	-.2677	-.2821	.0000	-.3008
120.000					-.2603								.0000	
130.000					-.4115								-.1759	
140.000					-.4974								-.1554	
150.000					-.4563								-.1419	
160.000					-.4026								-.1477	
170.000					-.3946								-.1679	
180.000					-.4020	-.3714	-.3248	-.2973	-.2812	-.2535	-.2307	-.2047	-.1922	-.1595

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6750	.6880	.7100
PHI														
90.000	-.2328	-.2492	-.2651	-.2692	-.2765	-.2758	-.2451	-.2221	-.2172	-.2089	-.2078	-.2166	-.2234	-.2455
100.000	-.2662	-.2837	-.2853	-.2878	-.2960	-.2244	-.2109	-.1840	-.1581	-.1809	-.1531	-.1875	-.1660	-.1741
110.000	-.2952	-.2655	-.2240	-.2025	-.1885	-.1799	-.1616	-.1402	-.1242	-.1274	-.1264	-.1266	-.1211	-.1218
120.000						-.1389							-.1110	
130.000						-.1562							-.1290	
140.000						-.0980							-.0946	
150.000						-.0639							-.0808	
160.000						-.0661							-.0780	
170.000						-.0744							-.0944	
180.000	-.1647	-.1419	-.1180	-.1193	-.1143	-.1145	-.1174	-.1183	-.1312	-.1272	-.1342	-.1321	-.1198	-.1296

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000							-.1939							
70.000							-.3185	-.2056	.0000					
80.000							-.3832	-.3948	-.1215					
90.000	-.2937	-.1802	-.2756	-.3311	-.3229	.0000	-.3455	-.3644	-.3165					
100.000	-.2973	-.2913	-.3213	-.2410	-.2454	-.2923								
110.000	-.2135	-.2590	-.1903	-.1335	-.1648	-.2958								
120.000						-.1462								
130.000						-.0511								
140.000						.3215								
150.000						.4596								
160.000						.5498								
170.000						.5340								
180.000	-.1024	-.2036	-.1267	.0851	.3141	.3589								

AP-5 66-030 PRESSURE VENTING - SHUTTLE ORBITER

(REC012)

MACH (9) = 1.35" ALPHA (8) = 16.970

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI														
80.000	.0111	-.0030	-.0307											
90.000	-.0272	-.0036	-.0217											
100.000	-.0330	-.0134	-.0119											
110.000		.0264	-.0154	-.1134	-.1700	-.1478	.0000	-.1495	-.1843	-.1885	-.2026	-.2084	.0000	-.2398
120.000					-.1693	-.1773	-.1682	-.1586	-.1787	-.1902	-.2235	-.2335	-.2632	-.2527
130.000					-.2033	-.2165	-.2093	-.2061	-.2350	-.2323	-.2701	-.2663	.0000	-.3028
140.000					-.2496								.0000	
150.000					-.4014								-.2329	
160.000					-.5097								-.1842	
170.000					-.4722								-.1498	
180.000					-.3594								-.1475	
190.000					-.3930								-.1427	
200.000					-.4175	-.3809	-.3350	-.3049	-.2975	-.2645	-.2465	-.2152	-.1916	-.1472
X/L	.4500	.4680	.4860	.5050	.5240	.5420	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100

PMI

90.000	-.2346	-.2586	-.2636	-.2784	-.2881	-.3085	-.2935	-.2679	-.2569	-.2642	-.2683	-.2785	-.2890	-.3214	.0000
100.000	-.2878	-.2935	-.3042	-.2937	-.2922	-.2633	-.2438	-.2156	-.1882	-.2016	-.1854	-.2007	-.2053	-.2219	-.2721
110.000	-.3182	-.3042	-.2889	-.2535	-.2174	-.2079	-.1834	-.1595	-.1422	-.1387	-.1508	-.1477	-.1482	-.1591	-.2050
120.000					-.1594									-.1232	
130.000					-.2167									-.1617	
140.000					-.1372									-.1289	
150.000					-.0920									-.1108	
160.000					-.0827									-.1040	
170.000					-.0868									-.1257	
180.000	-.1422	-.1392	-.0995	-.1246	-.1254	-.1354	-.1345	-.1429	-.1422	-.1497	-.1460	-.1515	-.1460	-.1478	-.1499
X/L	.7290	.7470	.7670	.7830	.8030	.8290	.8620	.9000	.9400						

PMI

80.000															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															
190.000															
200.000															
X/L	.8690	.8870	.9070	.9230	.9430	.9690	.9920	.9900	.9400						

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A83

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECD12)

MACH (10) = 1.501 ALPHA (1) = 6.342

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0070 .1260 .1640 .2030 .2420 .2810 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .0537 .0474 .0765
70.000 .0700 .0582 .0209
80.000 .0795 .0665 .0418
90.000 .1033 .0103 .1556 .1854 .1183 .0000 .1625 .1789 .1761 .1785 .1803 .0000 .1808
100.000 .1870 .2109 .2081 .1940 .1934 .1952 .2147 .1926 .1931 .1446
110.000 .2654 .2534 .2523 .2418 .2429 .2336 .2150 .1672 .0000 .1170
120.000 .2670 .2670 .3445 .3445
130.000 .3672 .3672
140.000 .3436 .3436
150.000 .3259 .3259
160.000 .3183 .3183
170.000 .2914 .2645 .2400 .2220 .2132 .1918 .1922 .1773 .1674 .1479
180.000 .4500 .4660 .4660 .5050 .5240 .5460 .5610 .5800 .6170 .6360 .6540 .6730 .6880 .7100

X/L

PHI

90.000 .1437 .1354 .1252 .1061 .11024 .1113 .0955 .0870 .0762 .0463 .0170 .0146 .0467 .0648 .0000
100.000 .1276 .1236 .1111 .1000 .0925 .0940 .0943 .0861 .0631 .0602 .0217 .0119 .0276 .0401 .0791
110.000 .1096 .1004 .0936 .0879 .0833 .0815 .0740 .0675 .0588 .0486 .0342 .0170 .0383 .0226 .0489
120.000 .0522 .0522 .0581 .0581 .0602 .0510 .0600 .0664 .0754 .0729 .0689 .0693 .0666 .0653 .0644 .0650
130.000 .0581 .0581 .0602 .0510 .0600 .0664 .0754 .0729 .0689 .0693 .0666 .0653 .0644 .0650
140.000 .0510 .0600 .0664 .0754 .0729 .0689 .0693 .0666 .0653 .0644 .0650
150.000 .0510 .0600 .0664 .0754 .0729 .0689 .0693 .0666 .0653 .0644 .0650
160.000 .0510 .0600 .0664 .0754 .0729 .0689 .0693 .0666 .0653 .0644 .0650
170.000 .0510 .0600 .0664 .0754 .0729 .0689 .0693 .0666 .0653 .0644 .0650
180.000 .0510 .0600 .0664 .0754 .0729 .0689 .0693 .0666 .0653 .0644 .0650

X/L

PHI

60.000 .0941 .1306 .0201 .0000
70.000 .1390 .1828 .0822
80.000 .1300 .1929 .0222
90.000 .1031 .0462 .0342 .0631 .0647 .0000
100.000 .1162 .1204 .1268 .0233 .0228 .0741
110.000 .0937 .1013 .0129 .0359 .0076 .0946 .0033
120.000 .2248 .2248
130.000 .3229 .3229
140.000 .2841 .2841
150.000 .2634 .2634
160.000 .2523 .2523
170.000 .1777 .1777
180.000 .1497 .1497

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/OA63

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (REC012)

MACH (10) = 1.500 ALPHA (2) = 0.563

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP													
X/L		.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4310
PHI															
60.000		.0540	.0450	.0062											
70.000		.0589	.0555	.0194											
80.000		.0675	.0655	.0341											
90.000				.0962	.0311	-.1350	-.1724	-.1669	.0000	-.1500	-.1727	-.1686	-.1722	-.1741	.0000
100.000							-.1714	-.1936	-.1902	-.1769	-.1791	-.1838	-.1985	-.2002	-.2059
110.000							-.2415	-.2306	-.2328	-.2225	-.2292	-.2323	-.2317	-.2024	-.1471
120.000							-.2457								.0000
130.000							-.3538								-.1232
140.000							-.3651								-.1342
150.000							-.3587								-.1532
160.000							-.3387								-.1690
170.000							-.3302								-.1771
180.000							-.3097	-.2809	-.2559	-.2346	-.2196	-.2041	-.1971	-.1831	-.1747
X/L		.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.7100
PHI															
90.000		-.1839	-.1736	-.1596	-.1388	-.1326	-.1390	-.1265	-.1234	-.1111	-.0930	-.0596	-.0542	-.0732	-.0354
100.000		-.1838	-.1576	-.1447	-.1263	-.1172	-.1194	-.1198	-.1122	-.0932	-.1008	-.0569	-.0489	-.0504	-.0600
110.000		-.1348	-.1219	-.1135	-.1074	-.1001	-.0999	-.0965	-.0861	-.0827	-.0746	-.0632	-.0459	-.0319	-.0410
120.000							-.0668								-.0415
130.000							-.0637								-.0381
140.000							-.0599								-.0453
150.000							-.0503								-.0558
160.000							-.0608								-.0607
170.000							-.0686								-.0639
180.000		-.1335	-.1184	-.0971	-.0936	-.0850	-.0769	-.0767	-.0736	-.0729	-.0736	-.0694	-.0694	-.0705	-.0686
X/L		.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI															
60.000															
70.000															
80.000															
90.000		-.1291	-.0764	-.1072	-.1387	-.1052	.0000								
100.000		-.1462	-.1523	-.1595	-.0642	-.0662	-.1072								
110.000		-.1264	-.1297	-.0608	.0060	-.0129	-.1313								
120.000							-.0269								
130.000							.1937								
140.000							.3325								
150.000							.3769								
160.000							.3891								
170.000							.3661								
180.000		-.0989	-.0982	.0547	.1350	.1805	.1475								

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECD12)

MACH (10) = 1.500 ALPHA (3) = 10.860

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3370	.3750	.3940	.4050	.4310
PHI															
60.000	.0558	.0392	.0004												
70.000	.0523	.0467	.0103												
80.000	.0549	.0531	.0238												
90.000			.0476	.0509	-.1280	-.1636	-.1542	.0000	-.1340	-.1582	-.1555	-.1624	-.1687	.0000	-.2101
100.000						-.1633	-.1811	-.1731	-.1637	-.1699	-.1731	-.1917	-.1972	-.2240	-.2196
110.000						-.2145	-.2140	-.2199	-.2109	-.2215	-.2253	-.2318	-.2382	.0000	-.1979
120.000						-.2236								.0000	
130.000						-.3547								-.1308	
140.000						-.3982								-.1341	
150.000						-.3664								-.1460	
160.000						-.3444								-.1604	
170.000						-.3382								-.1736	
180.000						-.3218	-.2955	-.2668	-.2442	-.2319	-.2155	-.2060	-.1854	-.1775	-.1468

X/L	.4500	.4880	.4880	.5050	.5240	.5460	.5810	.5800	.5980	.6170	.6360	.6540	.6750	.6880	.7100
PHI															
90.000	-.2020	-.2100	-.2081	-.1831	-.1708	-.1717	-.1559	-.1527	-.1373	-.1360	-.1095	-.1044	-.1134	-.1259	.0000
100.000	-.2148	-.2043	-.1785	-.1570	-.1458	-.1447	-.1461	-.1371	-.1152	-.1248	-.0991	-.0950	-.0834	-.0864	-.1288
110.000	-.1773	-.1546	-.1364	-.1276	-.1220	-.1224	-.1128	-.1048	-.0969	-.0873	-.0881	-.0821	-.0672	-.0642	-.0941
120.000						-.0968								-.0787	
130.000						-.0751								-.0627	
140.000						-.0628								-.0571	
150.000						-.0491								-.0569	
160.000						-.0596								-.0633	
170.000						-.0702								-.0736	
180.000	-.1303	-.1195	-.0998	-.0996	-.0922	-.0844	-.0855	-.0817	-.0786	-.0789	-.0767	-.0754	-.0772	-.0805	-.0856

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
60.000									
70.000									
80.000									
90.000	-.1787	-.0969	-.1659	-.1920	-.1626	.0000			
100.000	-.1831	-.1839	-.2017	-.1146	-.1072	-.1518			
110.000	-.1560	-.1590	-.0968	-.0304	-.0423	-.1671			
120.000						-.0650			
130.000						.1429			
140.000						.3314			
150.000						.4146			
160.000						.4497			
170.000						.4077			
180.000	-.1218	-.1263	-.0100	.1264	.1965	.2013			

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECO12)

MACH (10) = 1.500 ALPHA (4) = 12.760

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0670	.1265	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4030	.4310
PHI															
60.000	.0501	.0331	.0078												
70.000	.0384	.0404	.0135												
80.000	.0398	.0444	.0279												
90.000		.0503	.0528	.1189	.1540	.1426	.0000	.1202	.1501	.1482	.1613	.1696	.0000	.2119	.2268
100.000				.1569	.1661	.1590	.1448	.1506	.1806	.1868	.1970	.2246	.2268	.2534	.2534
110.000				.1961	.1984	.2043	.1977	.2103	.2199	.2293	.2426	.0000	.0000	.0000	.0000
120.000				.2136											
130.000				.3526											
140.000				.4112											
150.000				.3790											
160.000				.3528											
170.000				.3419											
180.000				.3345	.3094	.2783	.2535	.2406	.2248	.2133	.1891	.1815	.1504		

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PHI

90.000	.2027	.2116	.2231	.2232	.2192	.2144	.1882	.1793	.1655	.1681	.1542	.1591	.1549	.1616	.0000
100.000	.2293	.2367	.2299	.2039	.1806	.1785	.1692	.1563	.1309	.1491	.1205	.1310	.1232	.1165	.1529
110.000	.2352	.1947	.1712	.1592	.1485	.1432	.1329	.1188	.1076	.1013	.1064	.1040	.0962	.0901	.1112
120.000					.1147									.0975	
130.000					.0994									.0910	
140.000					.0678									.0669	
150.000					.0471									.0629	
160.000					.0535									.0672	
170.000					.0699									.0854	
180.000	.1353	.1276	.1195	.1066	.0990	.0917	.0913	.0895	.0929	.0936	.0926	.0933	.0968	.0986	.1055

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI

60.000							.1748		
70.000							.2700	.2169	.0000
80.000							.2831	.3091	.1217
90.000	.1940	.1098	.1884	.2526	.2323	.0000	.2524	.2965	.2927
100.000	.2098	.2105	.2400	.1706	.1672	.2039			
110.000	.1704	.1850	.1319	.0745	.0870	.2155			
120.000						.0931			
130.000						.0449			
140.000						.3307			
150.000						.4452			
160.000						.5154			
170.000						.4726			
180.000	.1375	.1423	.0972	.0751	.2546	.3169			

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0A63

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECO12)

MACH (10) = 1.500 ALPHA (5) = 14.880

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2810	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
90.000	.0422	.0252	.0031											
70.000	.0190	.0270	.0140											
60.000	.0175	.0276	.0250											
50.000			.0508	-.0068	-.1074	-.1406	-.1291	.0000	-.1138	-.1498	-.1539	-.1638	-.1717	.0000
100.000						-.1397	-.1559	-.1410	-.1294	-.1460	-.1594	-.1877	-.1982	-.2243
110.000						-.1617	-.1659	-.1917	-.1797	-.1981	-.2130	-.2300	-.2447	.0000
120.000						-.2080								.0000
130.000						-.3485								-.1635
140.000						-.4280								-.1506
150.000						-.3910								-.1418
160.000						-.3535								-.1420
170.000						-.3456								-.1638
180.000						-.3468	-.3211	-.2862	-.2615	-.2524	-.2332	-.2177	-.1936	-.1839
X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880
PHI														
90.000	-.1987	-.2116	-.2221	-.2261	-.2339	-.2482	-.2347	-.2168	-.2085	-.2079	-.1986	-.2022	-.2008	-.2115
100.000	-.2234	-.2438	-.2476	-.2427	-.2291	-.2147	-.1975	-.1806	-.1546	-.1785	-.1487	-.1488	-.1487	-.1872
110.000	-.2645	-.2480	-.2285	-.2041	-.1800	-.1673	-.1468	-.1347	-.1209	-.1216	-.1240	-.1177	-.1065	-.1347
120.000						-.1260								-.0974
130.000						-.1372								-.1213
140.000						-.0811								-.0902
150.000						-.0536								-.0770
160.000						-.0550								-.0768
170.000						-.0677								-.0983
180.000	-.1436	-.1352	-.1114	-.1181	-.1113	-.1073	-.1120	-.1164	-.1189	-.1211	-.1219	-.1244	-.1213	-.1273
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
90.000														
70.000														
60.000														
50.000														
100.000	-.2942	-.1248	-.2501	-.3112	-.2957	.0000								
110.000	-.2898	-.2544	-.2927	-.2211	-.2192	-.2590								
120.000	-.2179	-.2312	-.1758	-.1144	-.1360	-.2567								
130.000						-.1013								
140.000						-.0067								
150.000						.3059								
160.000						.4604								
170.000						.5642								
180.000	-.1847	-.1829	-.1196	-.0906	.2765	.3913								

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 66-63D PRESSURE VENTING - SHUTTLE ORBITER (RECD12)

MACH (10) = 1.500 ALPHA (6) = 16.910

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4090	.4310
PHI															
60.000	.0309	.0215	-.0150												
70.000	-.0046	.0219	-.0039												
80.000	-.0063	.0133	.0069												
90.000		.0336	-.0119	-.1114	-.1346	-.1222	.0000	-.1178	-.1303	-.1503	-.1614	-.1583	.0000	-.2034	
100.000				-.1341	-.1453	-.1305	-.1256	-.1438	-.1551	-.1712	-.1879	-.2146	-.2152		
110.000				-.1178	-.1729	-.1147	-.1674	-.1950	-.2116	-.2286	-.2348	.0000	-.2375		
120.000					-.2049							.0000			
130.000					-.3449							-.2012			
140.000					-.4404							-.1688			
150.000					-.4069							-.1406			
160.000					-.3654							-.1377			
170.000					-.3527							-.1559			
180.000					-.3614	-.3339	-.2961	-.2736	-.2608	-.2399	-.2240	-.1977	-.1861	-.1561	

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1975	-.2115	-.2218	-.2321	-.2376	-.2633	-.2599	-.2584	-.2562	-.2443	-.2448	-.2553	-.2658	-.2812	.0000
100.000	-.2236	-.2436	-.2519	-.2455	-.2437	-.2501	-.2338	-.2157	-.1856	-.1914	-.1698	-.1754	-.1854	-.1915	-.2357
110.000	-.2700	-.2676	-.2644	-.2438	-.2161	-.1960	-.1738	-.1595	-.1417	-.1381	-.1326	-.1330	-.1303	-.1319	-.1718
120.000					-.1349									-.1053	
130.000					-.1937									-.1412	
140.000					-.1158									-.1089	
150.000					-.0733									-.0921	
160.000					-.0687									-.0919	
170.000					-.0769									-.1113	
180.000	-.1472	-.1373	-.1018	-.1235	-.1169	-.1146	-.1213	-.1301	-.1318	-.1381	-.1370	-.1363	-.1379	-.1299	-.1484

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PHI									
60.000									
70.000									
80.000									
90.000	-.2962	-.1581	-.3077	-.3765	-.3540	.0000			
100.000	-.3283	-.3099	-.3562	-.2786	-.2703	-.3081			
110.000	-.2670	-.2652	-.2253	-.1637	-.1713	-.3031			
120.000					-.1343				
130.000					.0034				
140.000					.2106				
150.000					.4626				
160.000					.5910				
170.000					.5874				
180.000	-.2046	-.2231	-.1437	-.1335	.2606	.4884			

(RECO13) (18 OCT 73)

TABULATED SOURCE DATA - 1A29/0A63

AMES 68-630 PRESSURE VENTING - SHUTTLE ORBITER

PARAMETRIC DATA

BETA = -6.000 ELEVTR = -15.000
 AILRON = .000 RUDDER = .000
 RN/L = 2.250

REFERENCE DATA

SRP = .0000 50 IN. XMRP = .0000 IN.
 LREF = .0000 IN. YMRP = .0000 IN.
 BRP = .0000 IN. ZMRP = .0000 IN.
 SCALE = .0150 SCALE

MACH (1) = 1.748 ALPHA (1) = 6.324

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L .0670 .1260 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PMI
 60.000 .2636 .2533 .1882
 70.000 .2717 .2600 .2047
 80.000 .2580 .2378 .2172
 90.000 .2427 .1722 .0297
 100.000 .0132 -.0200 -.0164 .0000 .0039 -.0136 -.0083 -.0111 -.0064 .0000 -.0362
 110.000 -.0180 -.0283 -.0180 -.0425 -.0089 -.0739 -.0790 -.0821 .0000 -.0860
 120.000 -.0077
 130.000 -.1324
 140.000 -.2557
 150.000 -.2559
 160.000 -.2348
 170.000 -.2385
 180.000 -.2482
 190.000 -.2208 -.2041 -.1900 -.1744 -.1608 -.1563 -.1462 -.1394 -.1296

X/L .4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100
 PMI
 90.000 -.0332 -.0368 -.0453 -.0472 -.0492 -.0585 -.0575 -.0597 -.0586 -.0555 -.0357 -.0304 -.0376 -.0476 .0000
 100.000 -.0373 -.0675 -.0703 -.0672 -.0652 -.0748 -.0710 -.0721 -.0680 -.0779 -.0573 -.0495 -.0379 -.0432 -.0617
 110.000 -.0944 -.0925 -.0950 -.0964 -.0981 -.1054 -.1054 -.0984 -.0990 -.0943 -.0919 -.0802 -.0642 -.0653 -.0839
 120.000 -.1709
 130.000 -.1333
 140.000 -.1217
 150.000 -.1111
 160.000 -.1017
 170.000 -.0945
 180.000 -.1246 -.1200 -.1060 -.1012 -.0944 -.0824 -.0793 -.0736 -.0718 -.0735 -.0719 -.0719 -.0717 -.0739 -.0474
 190.000 .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

X/L
 PMI
 60.000
 70.000
 80.000
 90.000
 100.000
 110.000
 120.000
 130.000
 140.000
 150.000
 160.000
 170.000
 180.000
 190.000
 200.000
 210.000
 220.000
 230.000
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 290.000
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 310.000
 320.000
 330.000
 340.000
 350.000
 360.000
 370.000
 380.000
 390.000
 400.000
 410.000
 420.000
 430.000
 440.000
 450.000
 460.000
 470.000
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 620.000
 630.000
 640.000
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 660.000
 670.000
 680.000
 690.000
 700.000
 710.000
 720.000
 730.000
 740.000
 750.000
 760.000
 770.000
 780.000
 790.000
 800.000
 810.000
 820.000
 830.000
 840.000
 850.000
 860.000
 870.000
 880.000
 890.000
 900.000
 910.000
 920.000
 930.000
 940.000
 950.000
 960.000
 970.000
 980.000
 990.000
 1000.000

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(RECO13)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (1) = 1.748 ALPHA (1) = 6.324

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PMI									
90.000									
130.000									
140.000									
150.000									
160.000									
170.000									
180.000									

MACH (1) = 1.749 ALPHA (2) = 6.472

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
90.000															
70.000															
60.000															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

PMI

AMES 00-030 PRESSURE VENTING - SHUTTLE ORBITER

(REC013)

$$\text{MACH} (1) = 1.749 \quad \text{ALPHA} (2) = 0.472$$

SECTION (1) FUSELAGE	DEPENDENT VARIABLE CP
1	0.0000
2	0.0000
3	0.0000
4	0.0000
5	0.0000
6	0.0000
7	0.0000
8	0.0000
9	0.0000
10	0.0000
11	0.0000
12	0.0000
13	0.0000
14	0.0000
15	0.0000
16	0.0000
17	0.0000
18	0.0000
19	0.0000
20	0.0000
21	0.0000
22	0.0000
23	0.0000
24	0.0000
25	0.0000
26	0.0000
27	0.0000
28	0.0000
29	0.0000
30	0.0000
31	0.0000
32	0.0000
33	0.0000
34	0.0000
35	0.0000
36	0.0000
37	0.0000
38	0.0000
39	0.0000
40	0.0000
41	0.0000
42	0.0000
43	0.0000
44	0.0000
45	0.0000
46	0.0000
47	0.0000
48	0.0000
49	0.0000
50	0.0000
51	0.0000
52	0.0000
53	0.0000
54	0.0000
55	0.0000
56	0.0000
57	0.0000
58	0.0000
59	0.0000
60	0.0000
61	0.0000
62	0.0000
63	0.0000
64	0.0000
65	0.0000
66	0.0000
67	0.0000
68	0.0000
69	0.0000
70	0.0000
71	0.0000
72	0.0000
73	0.0000
74	0.0000
75	0.0000
76	0.0000
77	0.0000
78	0.0000
79	0.0000
80	0.0000
81	0.0000
82	0.0000
83	0.0000
84	0.0000
85	0.0000
86	0.0000
87	0.0000
88	0.0000
89	0.0000
90	0.0000
91	0.0000
92	0.0000
93	0.0000
94	0.0000
95	0.0000
96	0.0000
97	0.0000
98	0.0000
99	0.0000
100	0.0000

[illegible]
$$\text{MACH (1)} = 1.751 \quad \text{ALPHA (3)} = 10.490$$

SECTION (1) FUSELAGE

X/L	.0470	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI															
60.000	.2735	.2444	.1856												
70.000	.2279	.2391	.1853												
80.000	.1957	.2161	.1881												
90.000		.1974	.1366	.0095	-.0191	-.0111	.0000	.0067	.0084	.0087	.0085	.0020	.0000	.0000	-.0166
100.000					-.0161	-.0105	-.0016	.0020	-.0019	-.0091	-.0164	-.0245	-.0336	-.0380	
110.000					-.0122	-.0158	-.0272	-.0272	-.0455	-.0567	-.0614	-.0692	.0000	.0000	-.0859
120.000					-.0105								.0000	.0000	
130.000					-.1421								-.2325		
140.000					-.2745								-.2339		
150.000					-.2823								-.2015		
160.000					-.2653								-.1751		
170.000					-.2556								-.1579		
180.000					-.2670	-.2368	-.2210	-.1971	-.1804	-.1687	-.1655	-.1571	-.1545	-.1450	

[illegible]

(RECO13)

AMES 00-030 PRESSURE VENTING - SHUTTLE ORBITER

MACH (1) = 1.751 ALPHA (3) = 10.490

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .4300 .4680 .4880 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

60.000 .1266

70.000

80.000 .1266

90.000

100.000 .1167 .1171 .1072 .1030 .0987 .0939 .0908 .0883 .0839 .0842 .0780 .0800 .0792 .0830 .0804

110.000

120.000

130.000

140.000

150.000

160.000

170.000

180.000

190.000

200.000

210.000

220.000

230.000

240.000

250.000

260.000

270.000

280.000

290.000

300.000

310.000

320.000

330.000

340.000

350.000

360.000

370.000

380.000

390.000

400.000

410.000

420.000

430.000

440.000

450.000

460.000

470.000

480.000

490.000

500.000

510.000

520.000

530.000

540.000

550.000

560.000

570.000

580.000

590.000

600.000

MACH (1) = 1.751 ALPHA (4) = 12.570

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .2671 .2382 .1836

70.000

80.000

90.000

100.000

110.000

120.000

130.000

140.000

150.000

160.000

170.000

180.000

190.000

200.000

210.000

220.000

230.000

240.000

250.000

260.000

270.000

280.000

290.000

300.000

310.000

320.000

AMES 68-830 PRESSURE VENTING - SHUTTLE ORBITER

(RECO13)

$$\text{MACM} (1) = 1.791 \quad \text{ALPHA} (4) = 12.570$$

SECTION () FUSELAGE

K/L	.4900	.4680	.4660	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PM:														
90.000	-.0124	-.0135	-.0231	-.0256	-.0337	-.0453	-.0476	-.0515	-.0534	-.0361	-.0356	-.0619	-.0619	.0000
100.000	-.0402	-.0456	-.0486	-.0509	-.0562	-.0661	-.0714	-.0789	-.0714	-.0926	-.0664	-.0636	-.0754	-.1069
110.000	-.0666	-.0905	-.0919	-.0942	-.0976	-.1068	-.1094	-.1136	-.1144	-.1205	-.1181	-.1096	-.1079	-.1378
120.000						-.3363						-.2493		
130.000						-.3353						-.2574		
140.000						-.2973						-.2970		
150.000						-.1562						-.1920		
160.000						-.1305						-.1051		
170.000						-.1155						-.1024		
180.000	-.1423	-.1310	-.1150	-.1133	-.1077	-.1000	-.0983	-.0944	-.0928	-.0950	-.0907	-.0940	-.0965	-.0797
K/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					

$$\text{MACH} (1) = 1.751 \quad \text{ALPHA} (5) = 14.640$$

SECTION (1) FUSELAGE

[illegible]

$$\text{MACH} (1) = 1.751 \quad \text{ALPMA} (5) = 14.640$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

LAUNCH 00-030 PRESSURE VENTING - SHUTTLE ORBITER

(REC013)

1	.0870	.1280	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4090	.4310
---	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

PWt					
160.000	-.2936				-.2116
170.000	-.2766				-.1926
180.000	-.2622	-.2363	-.2210	-.2029	-.1811
190.000					-.1761
					-.1572

[illegible]

	.7200	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
--	-------	-------	-------	-------	-------	-------	-------	-------	-------

[illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD:19)

$$\text{MACM} (1) = 1.751 \quad \text{ALPHA} (6) = 16.730$$

SECTION (1) FUSELAGE	DEPENDENT VARIABLE C°
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

W/L	.0870	.1280	.1640	.2030	.2420	.2840	.2820	.3010	.3150	.3380	.3370	.3750	.3940	.4030	.4310
PW1															
60,000	.2411	.2235	.1776												
70,000	.1591	.1949	.1633												
80,000	.1034	.1395	.1473												
90,000			.1182	.0646	-.0158	-.0308	-.0155	.0000	.0023	.0048	.0053	.0073	.0053	.0000	-.0104
100,000					-.0275	-.0122	-.0030	.0026	.0000	.0000	-.0019	-.0050	-.0110	-.0220	-.0293
110,000					-.0158	-.0130	-.0136	-.0175	-.0308	-.0411	-.0506	-.0605	.0000	.0000	-.0071
120,000					-.0286									.0000	
130,000					-.1463									-.3328	
140,000					-.2977									-.3247	
150,000					-.3199									-.3075	
160,000					-.3082									-.2285	
170,000					-.2918									-.2014	
180,000					-.2835									-.1941	
190,000					-.2711									-.1868	
200,000					-.2555									-.1802	
210,000					-.2310									-.1723	
220,000					-.2044									-.1639	
230,000					-.1785									-.1552	
240,000					-.1544									-.1463	
250,000					-.1318									-.1372	
260,000					-.1106									-.1281	
270,000					-.0908									-.1194	
280,000					-.0724									-.1110	
290,000					-.0555									-.1030	
300,000					-.0400									-.0953	
310,000					-.0259									-.0900	
320,000					-.0132									-.0850	
330,000					-.0020									-.0803	
340,000					.0076									-.0760	
350,000					.0175									-.0721	
360,000					.0266									-.0686	
370,000					.0346									-.0655	
380,000					.0411									-.0628	
390,000					.0466									-.0603	
400,000					.0511									-.0583	
410,000					.0546									-.0566	
420,000					.0571									-.0551	
430,000					.0586									-.0536	
440,000					.0591									-.0521	
450,000					.0586									-.0506	
460,000					.0571									-.0491	
470,000															

60,000	-1,297	-1,864	-1,796	-1,920	-1,946	.0000	-2,767		
70,000	-1,061	-1,563	-1,579	-1,433	-1,590	-1,507	-2,633	-.2712	.0000
80,000	-1,264	-1,557	-1,363	-1,165	-1,100	-.0062	-2,502	-.2231	-.2206
90,000						.1245	-1,515	-.1752	-.1939
100,000						.0166			
20,000						-.0949			
30,000						-.0712			
40,000						.0576			
50,000						-.0630			
60,000	-1,280	-1,441	-1,411	-1,411	.1094	.5006			

TABULATED SOURCE DATA - 1A29/0A63

AMES 64-030 PRESSURE VENTING - SHUTTLE ORBITER (REC013)

DATE 24 MAR 74

MACH (2) = 2.021 ALPHA (1) = 0.010

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1200	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI														
80.000	.2347	.2327	.1746											
90.000	.2471	.2344	.1863											
100.000	.2333	.2339	.1969											
110.000		.2148	.1490	.0264	.0011	-.0041	.0000	.0117	.0114	.0129	.0091	.0126	.0000	-.0034
120.000					.0055	-.0009	.0082	.0091	.0032	-.0011	-.0135	-.0164	-.0270	-.0222
130.000					.0102	-.0009	-.0065	-.0123	-.0316	-.0366	-.0470	-.0524	.0000	-.0529
140.000					.0301								.0090	
150.000					-.0719								-.1624	
160.000					-.1766								-.1536	
170.000					-.1662								-.1466	
180.000					-.1768								-.1427	
190.000					-.1731								-.1323	
200.000					-.1850	-.1782	-.1651	-.1557	-.1470	-.1359	-.1300	-.1326	-.1255	-.1179

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
80.000	-.0089	-.0147	-.0162	-.0141	-.0165	-.0194	-.0274	-.0291	-.0318	-.0344	-.0257	-.0222	-.0288	.0000
90.000	-.0232	-.0368	-.0374	-.0357	-.0346	-.0345	-.0413	-.0445	-.0431	-.0527	-.0503	-.0442	-.0306	-.0497
100.000	-.0834	-.0804	-.0619	-.0649	-.0640	-.0693	-.0692	-.0701	-.0711	-.0739	-.0614	-.0753	-.0640	-.0685
110.000						-.1799							-.1829	
120.000						-.1479							-.1528	
130.000						-.1340							-.1148	
140.000						-.1177							-.1020	
150.000						-.1096							-.0889	
160.000						-.1020							-.0767	
170.000	-.1221	-.1180	-.1123	-.1065	-.1017	-.0977	-.0907	-.0829	-.0765	-.0736	-.0724	-.0677	-.0677	.0372

X/L	.7280	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
-----	-------	-------	-------	-------	-------	-------	-------	-------	-------

PMI									
80.000							-.0944		
90.000							-.0933	-.0471	.0000
100.000							-.0408	-.0486	-.0368
110.000	-.0833	-.0832	-.0823	-.0850	-.0899	.0000	.0026	-.0359	-.0630
120.000	-.0328	-.0751	-.0835	-.0884	-.0967	.0146			
130.000	-.0858	-.0849	-.1008	-.0851	.0079	.1119			
140.000					.3036	.2675			
150.000					-.0032				
160.000					.0612	.1046			
170.000					.0735	.0735			
180.000	-.0774	-.0836	.0046	.0761	.0987	.1793			

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A83

APES 06-030 PRESSURE VENTING - SHUTTLE ORBITER (REC013)

MACH (2) = 2.019 ALPHA (2) = 0.062

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

80.000 .2711 .2396 .1817
 90.000 .2450 .2342 .1870
 100.000 .2207 .2222 .1905
 110.000 .2011 .1384 .0235
 120.000 .0049 -.0013 .0000 .0110 .0139 .0127 .0104 .0077 .0000 -.0037
 130.000 .0021 .0031 .0069 .0101 .0072 .0010 -.0045 -.0093 -.0184 -.0223
 140.000 .0095 .0063 -.0026 -.0069 -.0264 -.0351 -.0402 -.0455 -.0000 -.0378
 150.000 .0247
 160.000 -.0855
 170.000 -.1906
 180.000 -.2031
 190.000 -.1950
 200.000 -.1906
 210.000 -.1996
 220.000 -.1880
 230.000 -.1772
 240.000 -.1685
 250.000 -.1595
 260.000 -.1484
 270.000 -.1444
 280.000 -.1386
 290.000 -.1368
 300.000 -.1312
 310.000 -.1289
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 330.000 -.1674
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 990.000 -.1368
 1000.000 -.1368

X/L

PHI

80.000 .0067 -.0052 -.0087 -.0096 -.0113 -.0208
 90.000 .0281 -.0323 -.0331 -.0370
 100.000 .0614 -.0636 -.0664 -.0670
 110.000 .0670
 120.000 .0694
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 980.000 .0694
 990.000 .0694
 1000.000 .0694

X/L

PHI

80.000 .1177
 90.000 .1140
 100.000 .0719
 110.000 .0247
 120.000 .0000
 130.000 .0000
 140.000 .0000
 150.000 .0000
 160.000 .0000
 170.000 .0000
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 1000.000 .0000

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC013)

MACH (2) = 2.017 ALPHA (3) = 10.940

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L .0870 .1265 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .2674 .2375 .1812
 70.000 .2267 .2261 .1780
 80.000 .1944 .2032 .1774
 90.000 .1774 .1199 .0113
 100.000 .0031 -.0027 -.0075 .0000 .0013 .0043 .0028 .0040 .0064 .0000 -.0036
 110.000 -.0031 -.0025 -.0025 -.0025 -.0013 .0002 -.0013 -.0075 -.0095 -.0163 -.0219
 120.000 .0020 -.0025 -.0069 -.0061 -.0342 -.0372 -.0455 .0000 .0000 .0000
 130.000 .0137
 140.000 -.0902
 150.000 -.2053
 160.000 -.2158
 170.000 -.2097
 180.000 -.2021
 190.000 -.2105
 200.000 -.1911
 210.000 -.1833
 220.000 -.1716
 230.000 -.1617
 240.000 -.1537
 250.000 -.1498
 260.000 -.1478
 270.000 -.1401

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.0066 -.0075 -.0128 -.0137 -.0148
 100.000 -.0263 -.0313 -.0331 -.0337 -.0387
 110.000 -.0649 -.0664 -.0667 -.0676 -.0676
 120.000 -.2519
 130.000 -.2416
 140.000 -.2041
 150.000 -.1650
 160.000 -.1238
 170.000 -.1078
 180.000 -.1347
 190.000 -.1282
 200.000 -.1153
 210.000 -.1097
 220.000 -.1061
 230.000 -.0944
 240.000 -.0939
 250.000 -.0898
 260.000 -.0872
 270.000 -.0863
 280.000 -.0837
 290.000 -.0834
 300.000 -.0828
 310.000 -.0851
 320.000 -.0676

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000
 70.000
 80.000
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AMES 88-830 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACH} (2) = 2.919 \quad \text{ALPHA} (4) = 13.729$$

DEPENDEN: VARIABLE CP

SECTION (1) FUSELAGE

[illegible]

PW1

Year	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412
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7/8

[illegible]

7/8

[illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECD13)

MACM (2) = 2.017 ALPHA (3) = 15.030

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

80.000 .2459 .2239 .1781
 70.000 .1830 .2026 .1708
 60.000 .1401 .1829 .1550
 50.000 .1348 .0896 -.0030 -.0283 -.0219 .0000 -.0103 -.0071 -.0037 -.0031 -.0030 .0000 -.0054
 40.000 -.0292 -.0141 -.0100 -.0094 -.0091 -.0083 -.0098 -.0145 -.0171
 30.000 -.0126 -.0129 -.0173 -.0187 -.0283 -.0329 -.0371 -.0424 .0000 -.0506
 20.000 -.0100
 10.000 -.0977
 0.000 -.2196
 130.000 -.2370
 150.000 -.2306
 160.000 -.2207
 170.000 -.2245
 180.000 -.2149 -.2065 -.1961 -.1856 -.1728 -.1675 -.1613 -.1587 -.1499

X/L .4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.0048 -.0051 -.0101 -.0119 -.0133 -.0204 -.0213 -.0250 -.0291 -.0294 -.0224 -.0201 -.0181 -.0285 .0000
 100.000 -.0201 -.0224 -.0265 -.0271 -.0306 -.0356 -.0395 -.0432 -.0429 -.0505 -.0435 -.0401 -.0346 -.0328 -.0350
 110.000 -.0556 -.0580 -.0612 -.0624 -.0635 -.0694 -.0713 -.0733 -.0742 -.0782 -.0800 -.0765 -.0678 -.0646 -.0763
 120.000 -.2532
 130.000 -.2508
 140.000 -.2644
 150.000 -.2308
 160.000 -.2227
 170.000 -.1169
 180.000 -.1419 -.1328 -.1187 -.1132 -.1046 -.0979 -.0964 -.0938 -.0932 -.0936 -.0959 -.1054 -.1033

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

80.000
 70.000
 60.000
 50.000
 40.000
 30.000
 20.000
 10.000
 0.000
 130.000
 140.000
 150.000
 160.000
 170.000
 180.000

TABULATED SOURCE DATA - 1A29/0A03

DATE 24 MAR 74

(REC013)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (2) = 2.019 ALPHA (6) = 17.140

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0470	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI															
60.000	.2363	.2192	.1794												
70.000	.1819	.1926	.1648												
80.000	.1115	.1420	.1467												
90.000		.1113	.0723	.0148	-.0366	-.0316	.0000	-.0206	-.0165	-.0151	-.0130	-.0084	.0000	-.0125	-.0181
100.000					-.0424	-.0354	-.0273	-.0209	-.0174	-.0177	-.0157	-.0131	-.0164	-.0181	-.0481
110.000					-.0345	-.0322	-.0302	-.0293	-.0331	-.0375	-.0384	-.0411	.0000	.0000	.0000
120.000					-.0328										
130.000					-.1101										
140.000					-.2258										
150.000					-.2473										
160.000					-.2421										
170.000					-.2310										
180.000					-.2316	-.2206	-.2116	-.2002	-.1886	-.1761	-.1707	-.1654	-.1660	-.1542	.7100

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.0105	-.0096	-.0137	-.0125	-.0134	-.0208	-.0251	-.0278	-.0301	-.0330	-.0260	-.0272	-.0269	-.0367	.0000
100.000	-.0202	-.0261	-.0275	-.0267	-.0296	-.0346	-.0388	-.0437	-.0416	-.0526	-.0422	-.0408	-.0359	-.0336	-.0549
110.000	-.0522	-.0561	-.0584	-.0608	-.0620	-.0675	-.0680	-.0720	-.0732	-.0775	-.0784	-.0724	-.0657	-.0651	-.0739
120.000						-.2490								-.2009	-.2050
130.000						-.2422								-.2235	-.2342
140.000						-.2575								-.2368	-.2024
150.000						-.2651									
160.000						-.2396									
170.000						-.1965									
180.000	-.1446	-.1358	-.1251	-.1240	-.1187	-.1195	-.1236	-.1221	-.1227	-.1236	-.1233	-.1294	-.1329	-.1396	-.1377

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
60.000									
70.000									
80.000									
90.000	-.0682	-.1124	-.1279	-.1437	-.1509	.0000			
100.000	-.0707	-.0931	-.1086	-.1207	-.1092	-.1070			
110.000	-.0645	-.1061	-.1176	-.0969	-.0739	.0977			
120.000						.1672			
130.000						.0363			
140.000						-.0822			
150.000						-.0615			
160.000						-.0262			
170.000						-.1515			
180.000	-.0645	-.1526	-.1526	-.1529	-.0152	.3309			

PARAMETRIC DATA

BETA	=	-6.000	ELEVTR	=	-15.000
AILRON	=	.000	RUDDER	=	.000
ENVI	=	3.500			

REFERENCE DATA

YREF =	.0000	SG. IN.	XREF =	.0000	IN.
LREF =	.0000	IN.	YREF =	.0000	IN.
B. ZP =	.0000	IN.	ZREF =	.0000	IN.
SCALE =	.0150	SCALE			

$$\alpha(1) = 6.148$$

DEPENDENT VARIABLE OF

[illegible][illegible]

	9070	9200	9620	9900	.9400
—					

[illegible]

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (REC014)

MACH (1) = .601 ALPHA (1) = 6.146

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

130.000 .0239
140.000 -.1941
150.000 -.0449
160.000 .1219
170.000 .1908
180.000 -.0463 .0456 .0726 .1208 .1453 .0423

MACH (1) = .600 ALPHA (2) = 6.262

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1260 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4090 .4310

PHI

60.000 .1039 .0614 -.0369
70.000 .1170 .0996 -.0181
80.000 .0605 .0764 -.0225
90.000 -.0163 -.2012 -.3063 -.1900 -.1452 -.0000 -.1220 -.1425 -.1223 -.1269 -.0984 .0000 -.1285
100.000 -.1962 -.1656 -.1496 -.1375 -.1291 -.1117 -.1303 -.1285 -.1637 -.1307
110.000 -.2428 -.2452 -.2442 -.1958 -.1822 -.1524 -.1568 -.1490 .0000
120.000 -.2987
130.000 -.5187
140.000 -.5103
150.000 -.3775
160.000 -.3104
170.000 -.2872
180.000 -.2440 -.1974 -.1750 -.1324 -.1502 -.1068 -.1116 -.0937 -.1009 -.0902
190.000 .4500 .4680 .4860 .5030 .5240 .5460 .5610 .5800 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.0621 -.0939 -.0923 -.0936 -.0964 -.1181 -.1282 -.1390 -.1690 -.2260 -.2255 -.2385 -.2469 -.2636 .0000
100.000 -.1241 -.1275 -.1407 -.1171 -.1226 -.1401 -.1591 -.1811 -.1690 -.2510 -.2026 -.2388 -.2357 -.1921 -.1597
110.000 -.1926 -.1957 -.1980 -.1951 -.1983 -.2060 -.1885 -.2089 -.2034 -.2139 -.2274 -.2438 -.2181 -.1906 -.1386
120.000 .1800
130.000 .1925
140.000 .1604
150.000 .1325
160.000 .1192
170.000 .0695
180.000 -.0930 -.0876 -.0770 -.0923 -.0776 -.0668 -.0973 -.0874 -.0976 -.1078 -.0854 -.0885 -.0591 -.0470 -.0238
190.000 .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

DATE 24 MAR 74

(REC914)

AMES 66-610 PRESSURE VENTING - SHUTTLE ORBITER

MACH (1) = .055 ALPHA (2) = 0.202

SECTION / 11 FIRST AGE

N/L	.7290	.7470	.7670	.7690	.8030	.8290	.8620	.9000	.9400
PMI							.2382		
60,000							.2032	.2185	.0000
70,000							.1760	.1400	.0934
80,000							.1500	.1175	.0637
90,000	-.1335	-.0853	.0068	.0718	.1068	.0000			
100,000	-.0964	-.0205	.0493	.1138	.1366	.1613			
110,000	-.1507	-.0707	.0930	.1686	.2372	.1878			
120,000						.0669			
130,000						-.0086			
140,000						-.2418			
150,000						-.0686			
160,000						.0809			
170,000						.1290			
180,000	-.0168	-.0964	.0452	.0749	.1225	.0813			

$$\text{MACH} (1) = .861 \quad \text{ALPHA} (3) = 10.380$$

SECTION (1) FIRST PAGE

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PW1															
80.000	.0999	.0856	-.0446												
70.000	.0946	.0847	-.0182												
60.000	.0230	.0669	-.0154												
50.000			-.0315	-.2153	-.3323	-.1950	-.1631	.0000	-.1349	-.1929	-.1641	-.1631	-.1182	.0000	-.1502
100.000						-.2216	-.2087	-.2040	-.1780	-.1659	-.1411	-.1814	-.1587	-.1947	-.1646
110.000						-.2740	-.2552	-.2856	-.2366	-.2177	-.1994	-.2085	-.1988	.0000	-.2004
120.000						-.3370								.0000	
130.000						-.5562								-.2330	
140.000						-.5537								-.1885	
150.000						-.3829								-.1430	
160.000						-.3357								-.1311	
170.000						-.2948								-.1119	
180.000						-.2263	-.2078	-.1861	-.1622	-.1498	-.1293	-.1179	-.0887	-.1044	-.1022

PW	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																																						
90.000	-1210	-1161	-1146	-1133	-1121	-1110	-1092	-1075	-1059	-1042	-1026	-1010	-994	-978	-962	-946	-930	-914	-898	-882	-866	-850	-834	-818	-802	-786	-770	-754	-738	-722	-706	-690	-674	-658	-642	-626	-610	-594	-578	-562	-546	-530	-514	-498	-482	-466	-450	-434	-418	-402	-386	-370	-354	-338	-322	-306	-290	-274	-258	-242	-226	-210	-194	-178	-162	-146	-130	-114	-98	-82	-66	-50	-34	-18	-2	14	30	46	62	78	94	110	126	142	158	174	190	206	222	238	254	270	286	302	318	334	350	366	382	398	414	430	446	462	478	494	510	526	542	558	574	590	606	622	638	654	670	686	702	718	734	750	766	782	798	814	830	846	862	878	894	910	926	942	958	974	990	1000
100.000	-1424	-1201	-1162	-1143	-1125	-1107	-1089	-1071	-1053	-1035	-1017	-1000	-982	-964	-946	-928	-910	-892	-874	-856	-838	-820	-802	-784	-766	-748	-730	-712	-694	-676	-658	-640	-622	-604	-586	-568	-550	-532	-514	-496	-478	-460	-442	-424	-406	-388	-370	-352	-334	-316	-298	-280	-262	-244	-226	-208	-190	-172	-154	-136	-118	-100	-82	-64	-46	-28	-10	8	26	44	62	80	98	116	134	152	170	188	206	224	242	260	278	296	314	332	350	368	386	404	422	440	458	476	494	512	530	548	566	584	602	620	638	656	674	692	710	728	746	764	782	800	818	836	854	872	890	908	926	944	962	980	998	1000														
110.000	-2049	-1203	-1164	-1145	-1127	-1109	-1091	-1073	-1055	-1037	-1019	-1001	-983	-965	-947	-929	-911	-893	-875	-857	-839	-821	-803	-785	-767	-749	-731	-713	-695	-677	-659	-641	-623	-605	-587	-569	-551	-533	-515	-497	-479	-461	-443	-425	-407	-389	-371	-353	-335	-317	-299	-281	-263	-245	-227	-209	-191	-173	-155	-137	-119	-101	-83	-65	-47	-29	-11	7	25	43	61	79	97	115	133	151	169	187	205	223	241	259	277	295	313	331	349	367	385	403	421	439	457	475	493	511	529	547	565	583	601	619	637	655	673	691	709	727	745	763	781	799	817	835	853	871	889	907	925	943	961	979	997	1000														
120.000	-2674	-1208	-1169	-1150	-1132	-1114	-1096	-1078	-1060	-1042	-1024	-1006	-988	-970	-952	-934	-916	-898	-880	-862	-844	-826	-808	-790	-772	-754	-7																																																																																																															

[illegible]

DATE 24 MAR 74

(REC'D)

JAMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{ALPHA} (1) = .000 \quad \text{ALPHA} (6) = 16.640$$

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

	1970	1980	1990	2000	2010	2020	2030	2040	2050	2060	2070	2080	2090	2100
\$/L	.0870	.1260	.1640	.2030	.2420	.2640	.3010	.3190	.3360	.3570	.3750	.3940	.4030	.4310

PMI

[illegible]

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PMI	-1190	-2131	-2181	-2231	-2074	-2078	-2717	-2782	-3141	-3797	-4069	-4119	-4330	-4178	-10000
90,000	-1900	-2131	-2181	-2231	-2074	-2078	-2717	-2782	-3141	-3797	-4069	-4119	-4330	-4178	-10000
100,000	-3026	-3038	-2871	-2680	-2382	-3016	-3212	-3011	-2909	-3899	-3593	-3810	-3977	-3377	-2741
110,000	-3787	-3423	-3371	-3640	-3684	-3682	-3667	-3750	-4023	-3738	-3742	-3998	-3494	-3182	-2679
120,000						-3762							-2199		
130,000						-2996							-2384		
140,000						-2677							-2471		
150,000						-2949							-3015		
160,000						-2993							-3606		
170,000						-1864							-2112		
180,000	-1190	-1215	-1281	-1604	-1472	-1369	-1304	-1681	-1700	-1880	-1908	-1608	-1367	-1021	-20484
190,000	-7290	-7470	-7670	-7630	-8030	-8290	-8620	-9000	-9400						

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[illegible]

DATE 24 MAR 74 TABULATED SOURCE DATA - 1429/0483

AMES 04-030 PRESSURE VENTING - SHUTTLE ORBITER (REC014)

MACH (2) = .750 ALPHA (1) = 6.330

SECTION (1) PURCHASE DEPENDENT VARIABLE CP

R/L	.0870	.1200	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
90.000	.1364	.1022	-.0142											
100.000	.1605	.1246	-.0023											
110.000	.1199	.1109	.0013											
120.000		.0026	-.2219	-.3775	-.2025	-.1319	.0000	-.0991	-.1391	-.0958	-.0955	-.0729	.0000	-.0972
130.000					-.2315	-.1949	-.1663	-.1299	-.1066	-.0823	-.1074	-.0940	-.1364	-.0990
140.000					-.2674	-.2269	-.2290	-.1750	-.1469	-.1278	-.1205	-.1033	.0000	-.1077
150.000					-.3131								.0000	
160.000					-.5232								-.1539	
170.000					-.5299								-.1372	
180.000					-.4320								-.1160	
190.000					-.4051								-.1103	
200.000					-.4172								-.0975	
210.000					-.4110	-.2216	-.1515	-.1314	-.1154	-.0929	-.0935	-.0934	-.0866	-.0797
220.000														
R/L	.4500	.4680	.4880	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6340	.6730	.6880	.7100

PHI														
90.000	-.0819	-.0539	-.0463	-.0497	-.0795	-.0836	-.0970	-.1318	-.1818	-.1966	-.2548	-.2628	-.2543	.0000
100.000	-.0915	-.0808	-.0782	-.0641	-.0976	-.1135	-.1277	-.1192	-.2039	-.1946	-.2412	-.2499	-.2007	-.1756
110.000	-.0999	-.1236	-.1037	-.1106	-.1063	-.1290	-.1334	-.1655	-.1859	-.2110	-.2394	-.2291	-.2059	-.1623
120.000					-.1752								-.1603	
130.000					-.1632								-.1186	
140.000					-.1344								-.0805	
150.000					-.0973								-.0787	
160.000					-.0966								-.0550	
170.000					-.0860								-.0566	
180.000	-.0821	-.0765	-.0761	-.0790	-.0666	-.0826	-.0885	-.0891	-.1035	-.0968	-.0823	-.0779	-.0640	-.0056
R/L	.7280	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					

PHI														
90.000														
100.000														
110.000														
120.000	-.1606	-.0873	.0328	.0794	.1145	.0000								
130.000	-.1413	-.0802	.0539	.1283	.1497	.1562								
140.000	-.1015	.0112	.1065	.2096	.2388	.1478								
150.000						.0931								
160.000						.0499								
170.000						-.1706								
180.000						-.0311								
190.000						.1113								
200.000	-.0880	.0479	.0872	.1153	.1483	.0796								

041E 24 MAR 74

ACCUMULATED SOURCE DATA - 1A29/OA63

AMES 04-030 PRESSURE VENTING - SHUTTLE ORBITER

(RECD:4)

$$\Delta G_{\text{PMA}}^{\circ}(2) = .740 \quad \Delta G_{\text{PMA}}^{\circ}(2) = 0.472$$

DEPENDENT VARIABLE CP

SECTION : FUSELAGE

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2
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[illegible]

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(RECD14)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (2) = .749 ALPHA (3) = 10.520

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3370	.3730	.3940	.4050	.4310
PHI														
60.000	.1128	.1032	-.0161											
70.000	.1026	.1080	.0018											
80.000	.0337	.0696	-.0065											
90.000			.0103	-.2151	-.3893	-.2076	-.1812	.0000	-.1678	-.2088	-.1665	-.1683	-.1149	.0000
100.000						-.2510	-.2458	-.2161	-.1962	-.1807	-.1629	-.1784	-.1572	-.2004
110.000						-.2748	-.2961	-.3046	-.2478	-.2406	-.2267	-.2032	-.1980	.0000
120.000						-.4027								.0000
130.000						-.6335								-.2126
140.000						-.6371								-.1617
150.000						-.5560								-.1353
160.000						-.5658								-.1214
170.000						-.6030								-.1021
180.000						-.6051	-.4433	-.2478	-.1531	-.1280	-.1053	-.0984	-.0937	-.0788
X/L	.4500	.4680	.4880	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880
PHI														
90.000	-.1099	-.1139	-.1194	-.0969	-.1207	-.1560	-.1425	-.1698	-.2107	-.3003	-.3425	-.4164	-.4465	-.4043
100.000	-.1515	-.1714	-.1698	-.1474	-.1455	-.2017	-.1953	-.2156	-.2284	-.3173	-.3317	-.3765	-.4038	-.2584
110.000	-.2004	-.1970	-.2093	-.2339	-.2140	-.2438	-.2480	-.2450	-.2893	-.3078	-.3543	-.3933	-.3427	-.2361
120.000						-.2778								-.2253
130.000						-.2171								-.1699
140.000						-.1713								-.1529
150.000						-.1561								-.1657
160.000						-.1412								-.1648
170.000						-.1283								-.1277
180.000	-.1027	-.0968	-.1103	-.1184	-.1220	-.1298	-.1226	-.1345	-.1569	-.1399	-.1591	-.1408	-.1248	-.0412
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000							.2163							
70.000							.1710	.1926	.0000					
80.000							.1341	.1226	.0763					
90.000	-.2724	-.1475	-.0445	.0090	.0699	.0000	.1159	.0862	.0404					
100.000	-.2197	-.0717	-.0164	.0553	.1149	.1148								
110.000	-.1641	-.0427	.0407	.1571	.1945	.1138								
120.000						.0805								
130.000						-.0125								
140.000						-.2442								
150.000						-.0591								
160.000						.0089								
170.000						-.0155								
180.000	-.0643	-.0115	.0197	.0597	.0857	.2155								

DATE 24 MAR 74

WFO 66-310 DEPRESSIVE VENTING - SHUTTLE ORBITER (REC014)

$\text{MACH} (2) = .75 \quad \text{ALPHA} (4) = 12.650$

SECTION (1) FUSELAGE	DEPENDENT VARIABLE CP
1	0.0000
2	0.0000
3	0.0000
4	0.0000
5	0.0000
6	0.0000
7	0.0000
8	0.0000
9	0.0000
10	0.0000
11	0.0000
12	0.0000
13	0.0000
14	0.0000
15	0.0000
16	0.0000
17	0.0000
18	0.0000
19	0.0000
20	0.0000
21	0.0000
22	0.0000
23	0.0000
24	0.0000
25	0.0000
26	0.0000
27	0.0000
28	0.0000
29	0.0000
30	0.0000
31	0.0000
32	0.0000
33	0.0000
34	0.0000
35	0.0000
36	0.0000
37	0.0000
38	0.0000
39	0.0000
40	0.0000
41	0.0000
42	0.0000
43	0.0000
44	0.0000
45	0.0000
46	0.0000
47	0.0000
48	0.0000
49	0.0000
50	0.0000
51	0.0000
52	0.0000
53	0.0000
54	0.0000
55	0.0000
56	0.0000
57	0.0000
58	0.0000
59	0.0000
60	0.0000
61	0.0000
62	0.0000
63	0.0000
64	0.0000
65	0.0000
66	0.0000
67	0.0000
68	0.0000
69	0.0000
70	0.0000
71	0.0000
72	0.0000
73	0.0000
74	0.0000
75	0.0000
76	0.0000
77	0.0000
78	0.0000
79	0.0000
80	0.0000
81	0.0000
82	0.0000
83	0.0000
84	0.0000
85	0.0000
86	0.0000
87	0.0000
88	0.0000
89	0.0000
90	0.0000
91	0.0000
92	0.0000
93	0.0000
94	0.0000
95	0.0000
96	0.0000
97	0.0000
98	0.0000
99	0.0000
100	0.0000

X/L	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4090	.4310
PKI															
60.000	.1151	.0980	-.0018												
70.000	.0768	.0658	.0142												
80.000	.0026	.0583	.0036												
90.000			-.0206	-.2006	-.3838	-.2511	-.1969	.0000	-.1799	-.2183	-.1933	-.1926	-.1481	.0000	-.1879
100.000						-.2627	-.2557	-.2523	-.2359	-.2159	-.2013	-.2147	-.1957	-.2189	-.1937
110.000						-.3042	-.3186	-.3418	-.2998	-.2768	-.2704	-.2463	-.2346	.0000	-.2294
120.000						-.4152								.0000	
130.000						-.6909								-.2356	
140.000						-.6564								-.1814	
150.000						-.5698								-.1462	
160.000						-.5883								-.1460	
170.000						-.6610								-.1186	
180.000						-.6491	-.4309	-.3294	-.1683	-.1475	-.1163	-.0980	-.1077	-.0941	-.0973

TABULATED SOURCE DATA - 1A29/0A83

DATE 24 MAR 74

(RECO14)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (2) = .752 ALPHA (5) = 14.750

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0670 .1260 .1840 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .0547 .0995 -.0022
70.000 .0291 .0710 .0069
80.000 -.0382 .0009
90.000
100.000
110.000
120.000
130.000
140.000
150.000
160.000
170.000
180.000

X/L

PHI

90.000
100.000
110.000
120.000
130.000
140.000
150.000
160.000
170.000
180.000

X/L

PHI

60.000
70.000
80.000
90.000
100.000
110.000
120.000
130.000
140.000
150.000
160.000
170.000
180.000

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECD14)

MACH (3) = .849 ALPHA (1) = 6.477

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
60.000	.1600	.1271	.0960												
70.000	.1933	.1490	.0279												
80.000	.1497	.1569	.0282												
90.000			.0366	-.2017	-.5035	-.2583	-.1639	.0000	-.1611	-.1813	-.1424	-.1200	-.0846	.0000	-.0962
100.000						-.2607	-.2202	-.2155	-.1813	-.1396	-.1265	-.1319	-.1167	-.1261	-.0989
110.000						-.3177	-.2592	-.2961	-.2623	-.1930	-.1582	-.1363	-.1317	.0000	-.1179
120.000						-.3630								.0000	
130.000						-.4823								-.1611	
140.000						-.5061								-.1319	
150.000						-.5715								-.1066	
160.000						-.6495								-.1003	
170.000						-.6576								-.0803	
180.000						-.6679	-.6217	-.5219	-.4255	-.2885	-.1708	-.0875	-.0656	-.0651	-.0441
X/L	.4500	.4680	.4880	.5050	.5240	.5480	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.0817	-.0505	-.0471	-.0343	-.0285	-.0471	-.0413	-.0604	-.1025	-.1641	-.1991	-.2824	-.3645	-.3871	.0000
100.000	-.0931	-.0859	-.0804	-.0661	-.0531	-.0751	-.0799	-.0965	-.1070	-.1981	-.2003	-.2748	-.3537	-.3285	-.3230
110.000	-.1055	-.1079	-.1031	-.0994	-.0973	-.1134	-.1179	-.1308	-.1522	-.1877	-.2241	-.2874	-.3145	-.3378	-.2875
120.000						-.1605								-.2626	
130.000						-.1363								-.1741	
140.000						-.1125								-.1401	
150.000						-.0922								-.1180	
160.000						-.0913								-.0985	
170.000						-.0792								-.1039	
180.000	-.0476	-.0452	-.0594	-.0563	-.0676	-.0727	-.0856	-.0994	-.1070	-.1179	-.1039	-.1172	-.1065	-.0844	-.0377
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PHI															
60.000							.2403								
70.000							.2274	.0000							
80.000							.1372	.0776							
90.000	-.3659	-.1371	-.0347	.0436	.0729	.0000	.1274	.1005	.0483						
100.000	-.2932	-.1066	.0075	.1037	.1121	.1236									
110.000	-.2312	-.0446	.0736	.1613	.1798	.1093									
120.000						.0759									
130.000						.0598									
140.000						-.1799									
150.000						-.0404									
160.000						.0706									
170.000						.1130									
180.000	-.2109	.0191	.0604	.0998	.1346	.1394									

(RECO14)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (3) = .850 ALPHA (2) = 6.568

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1200 .1640 .2030 .2420 .2640 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PMI

80.000 .1484 .1397 .0212
 90.000 .1645 .1306 .0341
 100.000 .1134 .1463 .0411
 110.000 .0667 -.1641 -.4660
 120.000 -.3127 -.1568 .0000
 130.000 -.2929 -.2238 -.2415
 140.000 -.3032 -.2746 -.3257
 150.000 -.3755
 160.000 -.5022
 170.000 -.5248
 180.000 -.5865
 190.000 -.6546
 200.000 -.6524
 210.000 -.6598
 220.000 -.6492
 230.000 -.5611
 240.000 -.4671
 250.000 -.3326
 260.000 -.2491
 270.000 -.1466
 280.000 -.0884
 290.000 -.0734
 300.000 -.0472
 310.000 .0000
 320.000 .0000
 330.000 .0000
 340.000 .0000
 350.000 .0000
 360.000 .0000
 370.000 .0000
 380.000 .0000
 390.000 .0000
 400.000 .0000
 410.000 .0000
 420.000 .0000
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 950.000 .0000
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 990.000 .0000
 1000.000 .0000

PMI

80.000 .0893 -.0769 -.0762
 90.000 -.1124 -.1224 -.1140
 100.000 -.1436 -.1364 -.1405
 110.000 -.0572 -.0572 -.0712
 120.000 -.0923 -.0923 -.0712
 130.000 -.1359 -.1359 -.1323
 140.000 -.0526 -.0526 -.0786
 150.000 -.1109 -.1109 -.1114
 160.000 -.1288 -.1288 -.1378
 170.000 -.1696 -.1696 -.1922
 180.000 -.1994
 190.000 -.1570
 200.000 -.1323
 210.000 -.1567
 220.000 -.1015
 230.000 -.0863
 240.000 -.0917
 250.000 -.0772
 260.000 -.0714
 270.000 -.0613
 280.000 -.0594
 290.000 -.0521
 300.000 .0000
 310.000 .0000
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 970.000 .0000
 980.000 .0000
 990.000 .0000
 1000.000 .0000

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PMI

80.000 .2289
 90.000 .1656
 100.000 .1349
 110.000 .1111
 120.000 .0881
 130.000 .0708
 140.000 .0526
 150.000 .0382
 160.000 .0207
 170.000 .0057
 180.000 .0214
 190.000 .0132
 200.000 .0132
 210.000 .0132
 220.000 .0132
 230.000 .0132
 240.000 .0132
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 300.000 .0132
 310.000 .0132
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 330.000 .0132
 340.000 .0132
 350.000 .0132
 360.000 .0132
 370.000 .0132
 380.000 .0132
 390.000 .0132
 400.000 .0132
 410.000 .0132
 420.000 .0132
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 610.000 .0132
 620.000 .0132
 630.000 .0132
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 650.000 .0132
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 670.000 .0132
 680.000 .0132
 690.000 .0132
 700.000 .0132
 710.000 .0132
 720.000 .0132
 730.000 .0132
 740.000 .0132
 750.000 .0132
 760.000 .0132
 770.000 .0132
 780.000 .0132
 790.000 .0132
 800.000 .0132
 810.000 .0132
 820.000 .0132
 830.000 .0132
 840.000 .0132
 850.000 .0132
 860.000 .0132
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 880.000 .0132
 890.000 .0132
 900.000 .0132
 910.000 .0132
 920.000 .0132
 930.000 .0132
 940.000 .0132
 950.000 .0132
 960.000 .0132
 970.000 .0132
 980.000 .0132
 990.000 .0132
 1000.000 .0132

[illegible]

AMES 60-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC'D 14)

$$\text{MACH} (3) = .049 \quad \text{ALPHA} (4) = 12.745$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

x/L	.0870	.1280	.1640	.2030	.2420	.2640	.3010	.3190	.3360	.3570	.3750	.3940	.4090	.4310
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[illegible]

22

13

90,000	-.1392	-.1299	-.1205	-.0969	-.0945	-.1239	-.1141	-.1281	-.1931	-.2818	-.3274	-.4165	-.5163	-.5519	.0000
100,000	-.1768	-.1970	-.1791	-.1410	-.1128	-.1584	-.1762	-.2002	-.2023	-.3244	-.3300	-.4217	-.4935	-.4947	-.4937
110,000	-.2396	-.2169	-.2206	-.2191	-.2028	-.2196	-.2311	-.2475	-.2825	-.3310	-.3740	-.4395	-.4764	-.4944	-.3470
120,000						-.2476								-.2977	
130,000						-.2009								-.2666	
140,000						-.1947								-.2563	
150,000						-.1776								-.2806	
160,000						-.1686								-.2509	
170,000						-.1393								-.2107	
180,000	-.0761	-.0617	-.0656	-.0952	-.1032	-.1272	-.1350	-.1460	-.1805	-.1916	-.2017	-.2167	-.1984	-.1641	-.1066

7

11

60,000	-4,914	-2,239	-1,633	-1,616	-1,551	.0000	-5,967	-1,474	-.0495
70,000	-3,047	-1,353	-1,190	-1,076	-1,005	-1,109	-1,366	-.0196	-.0061
80,000	-2,397	-1,049	-1,069	.0072	.0170	-.0797	-1,020		
90,000						-.0644	-.0644		
100,000						-.2474	-.2474		
20,000						-.1642	-.1642		
30,000						-.0231	-.0231		
40,000						-.1617	-.1617		
50,000						-.0744	-.0744		
60,000						-.0299	-.0299		
70,000						-.1562	-.1562		
80,000									
90,000									
100,000									

100

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

(RECO14)

MACH (3) = .849 ALPHA (3) = 14.830

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.7870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
90.000	.0919	.1132	.0246											
70.000	.0473	.1036	.0469											
80.000	-.0225	.0432	.0303											
90.000		.0169	-.1325	-.4554	-.2856	-.2167	.0000	-.2270	-.2739	-.2760	-.2246	-.2045	.0000	-.2182
100.000					-.3023	-.2646	-.2613	-.2703	-.3167	-.3158	-.2862	-.2447	-.2662	-.2293
110.000					-.3713	-.3591	-.3622	-.3969	-.4545	-.4455	-.3106	-.3211	.0000	-.2871
120.000					-.4606								.0000	
130.000					-.5642								-.2621	
140.000					-.5747								-.2218	
150.000					-.6142								-.1896	
160.000					-.6773								-.1896	
170.000					-.6816								-.1801	
180.000					-.6954	-.6909	-.6250	-.5098	-.4193	-.3250	-.2216	-.1416	-.1397	-.1004

X/L	.4500	.4680	.4880	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6750	.6880	.7100
PHI														
90.000	-.1582	-.1569	-.1317	-.1155	-.1134	-.1570	-.1276	-.1461	-.1996	-.2075	-.3525	-.4289	-.4852	.0000
100.000	-.2240	-.2156	-.2102	-.1531	-.1465	-.1894	-.1866	-.2119	-.2020	-.3449	-.3378	-.4161	-.4762	-.4945
110.000	-.2812	-.2602	-.2422	-.2480	-.2342	-.2480	-.2434	-.2673	-.2806	-.3316	-.3686	-.4384	-.4401	-.3755
120.000					-.2651								-.3093	
130.000					-.2281								-.2746	
140.000					-.2516								-.2936	
150.000					-.2328								-.3492	
160.000					-.2169								-.3245	
170.000					-.1618								-.2670	
180.000	-.0859	-.0690	-.1023	-.1158	-.1329	-.1331	-.1609	-.1761	-.2010	-.2236	-.2331	-.2577	-.2155	-.1299

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
90.000														
70.000														
80.000														
90.000	-.4891	-.2873	-.2630	-.2304	-.2316	.0000								
100.000	-.3371	-.2106	-.1700	-.1214	-.1303	-.2106								
110.000	-.2724	-.1366	-.0690	.0049	-.0039	-.1542								
120.000					-.0397									
130.000					-.1124									
140.000					-.2917									
150.000					-.1986									
160.000					-.0523									
170.000					-.2927									
180.000	-.1769	-.1143	-.0567	-.0345	.0512	.2556								

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0A03

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC014)

MACH (3) = .630 ALPHA (8) = 16.940

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0070	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3300	.3370	.3750	.3940	.4050	.4310
PHI															
60.000	.0835	.0960	.0321												
70.000	-.0015	.0768	.0345												
80.000	-.1366	.0201	.0209												
90.000		.0050	-.1050	-.4557	-.3065	-.2420	-.2096	-.0000	-.1744	-.2896	-.3098	-.3101	-.2503	.0000	-.2646
100.000					-.3496	-.2939	-.2970	-.2970	-.2	-.3213	-.3568	-.3179	-.2840	-.2807	-.2722
110.000					-.4104	-.3777	-.3603	-.3603	-.4	-.4765	-.5061	-.4704	-.5479	.0000	-.5315
120.000						-.4792								.0000	
130.000						-.6377								-.5455	
140.000						-.6124								-.2510	
150.000						-.6351								-.2346	
160.000						-.6718								-.2481	
170.000						-.7063								-.2127	
180.000						-.6818	-.6775	-.6452	-.5332	-.4082	-.3013	-.2378	-.1703	-.1469	-.1196

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5820	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PHI

50.000	-.2045	-.1610	-.1497	-.1331	-.1189	-.1356	-.1711	-.2232	-.3177	-.3820	-.4663	-.5556	-.6079	.0000	.0000
100.000	-.2638	-.2533	-.2337	-.1889	-.1596	-.1969	-.2022	-.2308	-.2208	-.3762	-.3625	-.4504	-.4980	-.4859	-.4659
110.000	-.3291	-.2728	-.2716	-.2783	-.2561	-.2817	-.2557	-.2854	-.3016	-.3503	-.3898	-.4580	-.4518	-.4497	-.3481
120.000						-.2516							-.2834		
130.000						-.2783							-.3019		
140.000						-.2531							-.3155		
150.000						-.2512							-.3437		
160.000						-.2519							-.3387		
170.000						-.2182							-.3314		
180.000	-.1184	-.1133	-.1029	-.1162	-.1432	-.1324	-.1946	-.2224	.2391	-.2790	-.2642	-.2765	-.2919	-.2530	-.1736

X/L	.7290	.7470	.7670	.7850	.8030	.8250	.8620	.9000	.9400
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PHI

60.000							-.2435		
70.000							-.5074	-.2195	.0000
80.000							-.5286	-.3281	-.2161
90.000	-.5006	-.3830	-.3171	-.3070	-.3615	.0000	-.5939	-.2895	-.2150
100.000	-.5244	-.1967	-.1882	-.1242	-.1892	-.2650			
110.000	-.7390	-.1455	-.0747	.0023	.0017	-.1734			
120.000						-.0469			
130.000						-.1141			
140.000						-.3134			
150.000						-.2333			
160.000						-.0764			
170.000						-.3790			
180.000	-.2225	-.1703	-.1179	-.0657	.0337	.3235			

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 86-830 PRESSURE VENTING - SHUTTLE ORBITER (RECD14)

MACM (4) = .950 ALPHA (1) = 6.556

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
PMI														
90.000	.2046	.1726	.0849											
70.000	.2344	.2005	.0826											
50.000	.2001	.2076	.0964											
30.000		.1087	-.1216	-.4643	-.4446	-.3314	.0000	-.2674	-.3419	-.3361	-.3840	-.1872	.0000	-.0148
100.000					-.4624	-.3917	-.3372	-.3271	-.3309	-.3440	-.4340	-.4074	-.0775	-.0130
110.000					-.5064	-.4667	-.4176	-.3987	-.4504	-.4734	-.476	-.0592	.0000	-.0234
120.000					-.5447								.0000	
130.000					-.7922								-.0877	
140.000					-1.0140								-.0754	
150.000					-.9676								-.1092	
160.000					-.9266								-.0471	
170.000					-.9171								-.0308	
180.000					-.7976	-.6596	-.4968	-.3183	-.2710	-.1475	-.1165	-.0406	-.0303	.0261

X/L	.4900	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	.0116	.0135	.0126	.0347	.0386	.0234	.0336	.0275	-.0052	-.0662	-.0993	-.1879	-.2670	-.3465	.0000
100.000	-.0084	-.0176	-.0130	.0053	.0166	-.0022	-.0043	-.0116	-.0161	-.1046	-.1130	-.1947	-.2580	-.2728	-.3529
110.000	-.0305	-.0330	-.0317	-.0317	-.0244	-.0927	-.0397	-.0433	-.0602	-.1028	-.1493	-.2191	-.2506	-.2692	-.3402
120.000						-.0611								-.2694	
130.000						-.0444								-.2142	
140.000						-.0316								-.1617	
150.000						-.0154								-.1446	
160.000						-.0020								-.1258	
170.000	.0409	.0361	.0379	.0295	.0180	.0082	-.0020	-.0159	-.0411	-.0550	-.0753	-.0921	-.0993	-.1197	-.0226

X/L	.7280	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PMI									
90.000							.2076		
70.000							.1731	.2264	.0000
50.000							.1380	.1656	.1124
30.000							.0997	.1196	.0615
100.000	-.4327	-.4260	-.3420	.0048	.0334	.0000			
110.000	-.3636	-.3824	-.1501	.0436	.0681	.0450			
120.000	-.3451	-.2761	-.0105	.1121	.1035	.1664			
130.000						.0507			
140.000						.0752			
150.000						-.1155			
160.000						-.0053			
170.000						.0854			
180.000	-.1160	.0358	.1145	.1564	.1938	.2566			

$$\alpha(4) = .948 \quad \alpha(6) = 17.085$$

SECTION (USEPAGE)

DEPENDENT VARIABLE CF

X/L	.0670	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMT															
60.000	.1129	.1538	.0901												
70.000	.0405	.1370	.1019												
80.000	-.0447	.0792	.0990												
90.000			.0805	-.0988	-.3617	-.3140	-.2328	.0000	-.2103	-.2566	-.2873	-.3067	-.3202	.0000	-.3929
100.000						-.3493	-.2762	-.2638	-.2377	-.2997	-.3329	-.3725	-.3879	-.4348	-.4025
110.000						-.4011	-.3385	-.3790	-.3680	-.4263	-.4631	-.4889	-.5065	.0000	-.5040
120.000														.0000	
130.000						-.5387								-.5452	
140.000						-.8126								-.4819	
150.000						-1.0660									
160.000						-.6344								-.3143	
170.000						-.6478								-.1623	
180.000						-.9989								-.1101	
190.000						-.6681	-.6689	-.6865	-.6298	-.4009	-.3198	-.4135	-.0973	-.0621	-.1616
X/L	.4500	.4880	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100

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DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/0A83

PAGE 1501

MACH (5) = 1.031 ALPHA (1) = 6.810

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER
(RECO14)

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0870	.1260	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI														
60.000	.3148	.3040	.1982											
70.000	.3476	.3285	.2195											
80.000	.3191	.3302	.2328											
90.000		.2393	.0112	-.2900	-.2796	-.1889	.0000	-.1414	-.2031	-.2169	-.2385	-.2288	.0000	-.2817
100.000					-.3018	-.2494	-.2088	-.1885	-.2088	-.2358	-.2855	-.2817	-.3269	-.2856
110.000					-.3392	-.3093	-.2833	-.2699	-.3010	-.3217	-.3407	-.3458	.0000	-.3119
120.000					-.3676								.0000	
130.000					-.5932								-.2724	
140.000					-.7995								-.2546	
150.000					-.7594								-.2279	
160.000					-.7149								-.2127	
170.000					-.7078								-.1925	
180.000					-.6111	-.5222	-.4083	-.3720	-.3513	-.2985	-.2544	-.1921	-.1617	-.1171
X/L	.4900	.4680	.4880	.5050	.5240	.5460	.5610	.5800	.5981	.6170	.6360	.6540	.6880	.7100
PMI														
90.000	-.2386	-.2129	-.1993	-.1583	-.1289	-.0125	.0760	.0951	.0735	.0195	.0617	-.0608	-.1313	-.1762
100.000	-.2822	-.2228	-.2090	-.1801	-.1486	-.0253	.0516	.0598	.0668	-.0173	-.0125	-.0671	-.1276	-.2311
110.000	-.2580	-.2117	-.2090	-.2110	-.1821	-.0520	.0195	.0311	.0207	-.0149	-.0455	-.0914	-.1292	-.2289
120.000						-.0639							-.1824	
130.000						-.0493							-.1234	
140.000						-.0352							-.0792	
150.000						-.0175							-.0558	
160.000						-.0113							-.0455	
170.000						-.0064							-.0274	
180.000	-.1010	-.0891	-.0751	-.0694	-.0505	.0031	.0250	.0424	.0455	.0369	.0280	.0102	-.0044	-.0321
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PMI														
60.000							.1157							
70.000							.1144	.2246	.0000					
80.000							.0783	.1547	.1929					
90.000	-.2785	-.2583	-.3222	-.1039	.0934	.0000	.0574	.1275	.1653					
100.000	-.2333	-.2701	-.2558	.0170	.1092	.0915								
110.000	-.2333	-.2496	-.0324	.1339	.1432	.1120								
120.000						.1350								
130.000						.1847								
140.000						-.0206								
150.000						.0856								
160.000						.1571								
170.000						.1265								
180.000	.0356	.1182	.1810	.2129	.2431	.3539								

NAME: 00-030 PRESSURE VENTING - SHUTTLE ORBITER (RECD14)

$$\text{MACH} (3) = 1.033 \quad \text{ALPHA} (2) = 8.697$$

SECTION (1) FUSELAGE	DEPENDENT VARIABLE CP
1	0.0000
2	0.0000
3	0.0000
4	0.0000
5	0.0000
6	0.0000
7	0.0000
8	0.0000
9	0.0000
10	0.0000
11	0.0000
12	0.0000
13	0.0000
14	0.0000
15	0.0000
16	0.0000
17	0.0000
18	0.0000
19	0.0000
20	0.0000
21	0.0000
22	0.0000
23	0.0000
24	0.0000
25	0.0000
26	0.0000
27	0.0000
28	0.0000
29	0.0000
30	0.0000
31	0.0000
32	0.0000
33	0.0000
34	0.0000
35	0.0000
36	0.0000
37	0.0000
38	0.0000
39	0.0000
40	0.0000
41	0.0000
42	0.0000
43	0.0000
44	0.0000
45	0.0000
46	0.0000
47	0.0000
48	0.0000
49	0.0000
50	0.0000
51	0.0000
52	0.0000
53	0.0000
54	0.0000
55	0.0000
56	0.0000
57	0.0000
58	0.0000
59	0.0000
60	0.0000
61	0.0000
62	0.0000
63	0.0000
64	0.0000
65	0.0000
66	0.0000
67	0.0000
68	0.0000
69	0.0000
70	0.0000
71	0.0000
72	0.0000
73	0.0000
74	0.0000
75	0.0000
76	0.0000
77	0.0000
78	0.0000
79	0.0000
80	0.0000
81	0.0000
82	0.0000
83	0.0000
84	0.0000
85	0.0000
86	0.0000
87	0.0000
88	0.0000
89	0.0000
90	0.0000
91	0.0000
92	0.0000
93	0.0000
94	0.0000
95	0.0000
96	0.0000
97	0.0000
98	0.0000
99	0.0000
100	0.0000

PMI	.0670	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
80,000	.3035	.2986	.2082												
70,000	.3164	.3198	.2225												
60,000	.2784	.3157	.2374												
50,000		.2541		.0340	-.2706	-.2631	-.1726	.0000	-.1306	-.1977	-.2125	-.2332	-.2258	.0000	-.2963
100,000						-.2886	-.2255	-.1890	-.1718	-.1999	-.2293	-.2836	-.2875	-.3422	-.3110
110,000						.3194	-.2836	-.2694	-.2599	-.2964	-.3235	-.3506	-.3662	.0000	-.3032
120,000						-.3709								-.3266	
130,000						-.6068								-.2848	
140,000						-.8250								-.2327	
150,000						-.7950								-.2086	
160,000						-.7454								-.1838	
170,000						-.7403								-.1557	-.1147
180,000						-.6351	-.5424	-.4216	-.3872	-.3555	-.2948	-.2403	-.1751	-.1557	-.1147

(RECORD)

NAME\$ 06-030 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACH} (S) = 1.050 \quad \text{ALPHA} (S) = 15.900$$

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

[illegible]

iii

[illegible]

78

PHI	-2.990	-2.920	-3.289	-.3041	-.3049	-.2456	.1203	.1427	.0952	.0155	-.0309	-.1260	-.2053	-.2392	.0000
90.000	-.3337	-.3656	-.3890	-.3578	-.3327	-.1611	.1066	.1004	.0732	-.0355	-.0520	-.1382	-.2001	-.2155	-.3149
100.000	-.4177	-.4192	-.4251	-.4010	-.2979	-.0398	.0452	.0381	-.0016	-.0348	-.1132	-.1786	-.2094	-.2534	-.3170
110.000						-.1034							-.2281		
120.000						-.1999							-.1609		
130.000						-.0248							-.1333		
140.000						-.0726							-.1694		
150.000						-.0640							-.1134		
160.000						.0365							-.0879		
170.000						.0490	.0400	.0497	.0472	.0258	.0108	-.0144	-.0357	-.0580	-.0153

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[illegible]

AMES 68-83D PRESSURE VELOCITY - SHUTTLE ORBITER

(RECD14)

MACH (5) = 1.052 ALPHA (4) = 12.910

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .2874 .3189 .2616

70.000 .2735 .3289 .2776

80.000 .2180 .2833 .2880

90.000 .2972 .0996 -.1740 -.1814 -.1881 -.1873 -.1948 -.2240 -.1896 .0000 -.2128

100.000 .1799 -.2110 -.1958 -.1732 -.2072 -.2389 -.3039 -.2533 -.2969 -.2564

110.000 .2226 -.2631 -.2775 -.2675 -.3131 -.3468 -.3419 -.3376 .0000 -.3567

120.000 .3022

130.000 .5682

140.000 .8159

150.000 .8463

160.000 .7614

170.000 .7525

180.000 .6421

190.000 .5842

200.000 .4722

210.000 .4352

220.000 .3767

230.000 .3049

240.000 .1121

250.000 .0816

260.000 .0699

270.000 .6880

280.000 .7100

290.000 .7100

300.000 .7100

310.000 .7100

320.000 .7100

330.000 .7100

340.000 .7100

350.000 .7100

360.000 .7100

370.000 .7100

380.000 .7100

390.000 .7100

400.000 .7100

410.000 .7100

420.000 .7100

430.000 .7100

440.000 .7100

450.000 .7100

460.000 .7100

470.000 .7100

480.000 .7100

490.000 .7100

500.000 .7100

510.000 .7100

520.000 .7100

530.000 .7100

540.000 .7100

550.000 .7100

(RECD14)

JAMES 00-030 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACH} (5) = 1.055 \quad \text{ALPHA} (5) = 15.090$$

SECTION (11#USELAGE

X/L	.0870	.1260	.1640	.2030	.2420	.2810	.3200	.3590	.3980	.4370	.4760	.5150	.5540	.5930	.6320	.6710	.7100	.7490	.7880	.8270	.8660	.9050	.9440	.9830	.0220	.0610	.1000	.1390	.1780	.2170	.2560	.2950	.3340	.3730	.4120	.4510	.4900	.5290	.5680	.6070	.6460	.6850	.7240	.7630	.8020	.8410	.8800	.9190	.9580	.9970	.0360	.0750	.1140	.1530	.1920	.2310	.2700	.3090	.3480	.3870	.4260	.4650	.5040	.5430	.5820	.6210	.6600	.6990	.7380	.7770	.8160	.8550	.8940	.9330	.9720	.0110	.0500	.0890	.1280	.1670	.2060	.2450	.2840	.3230	.3620	.4010	.4400	.4790	.5180	.5570	.5960	.6350	.6740	.7130	.7520	.7910	.8300	.8690	.9080	.9470	.9860	.0250	.0640	.1030	.1420	.1810	.2200	.2590	.2980	.3370	.3760	.4150	.4540	.4930	.5320	.5710	.6100	.6490	.6880	.7270	.7660	.8050	.8440	.8830	.9220	.9610	.0000	.0390	.0780	.1170	.1560	.1950	.2340	.2730	.3120	.3510	.3900	.4290	.4680	.5070	.5460	.5850	.6240	.6630	.7020	.7410	.7800	.8190	.8580	.8970	.9360	.9750	.0140	.0530	.0920	.1310	.1700	.2090	.2480	.2870	.3260	.3650	.4040	.4430	.4820	.5210	.5600	.5990	.6380	.6770	.7160	.7550	.7940	.8330	.8720	.9110	.9500	.9890	.0280	.0670	.1060	.1450	.1840	.2230	.2620	.3010	.3400	.3790	.4180	.4570	.4960	.5350	.5740	.6130	.6520	.6910	.7300	.7690	.8080	.8470	.8860	.9250	.9640	.0030	.0420	.0810	.1200	.1590	.1980	.2370	.2760	.3150	.3540	.3930	.4320	.4710	.5100	.5490	.5880	.6270	.6660	.7050	.7440	.7830	.8220	.8610	.9000	.9390	.9780	.0170	.0560	.0950	.1340	.1730	.2120	.2510	.2900	.3290	.3680	.4070	.4460	.4850	.5240	.5630	.6020	.6410	.6800	.7190	.7580	.7970	.8360	.8750	.9140	.9530	.9920	.0310	.0700	.1090	.1480	.1870	.2260	.2650	.3040	.3430	.3820	.4210	.4600	.4990	.5380	.5770	.6160	.6550	.6940	.7330	.7720	.8110	.8500	.8890	.9280	.9670	.0060	.0450	.0840	.1230	.1620	.2010	.2400	.2790	.3180	.3570	.3960	.4350	.4740	.5130	.5520	.5910	.6300	.6690	.7080	.7470	.7860	.8250	.8640	.9030	.9420	.9810	.0210	.0600	.0990	.1380	.1770	.2160	.2550	.2940	.3330	.3720	.4110	.4500	.4890	.5280	.5670	.6060	.6450	.6840	.7230	.7620	.8010	.8400	.8790	.9180	.9570	.9960	.0340	.0730	.1120	.1510	.1900	.2290	.2680	.3070	.3460	.3850	.4240	.4630	.5020	.5410	.5800	.6190	.6580	.6970	.7360	.7750	.8140	.8530	.8920	.9310	.9700	.0090	.0480	.0870	.1260	.1650	.2040	.2430	.2820	.3210	.3600	.3990	.4380	.4770	.5160	.5550	.5940	.6330	.6720	.7110	.7500	.7890	.8280	.8670	.9060	.9450	.9840	.0240	.0630	.1020	.1410	.1800	.2190	.2580	.2970	.3360	.3750	.4140	.4530	.4920	.5310	.5700	.6090	.6480	.6870	.7260	.7650	.8040	.8430	.8820	.9210	.9600	.9990	.0370	.0760	.1150	.1540	.1930	.2320	.2710	.3100	.3490	.3880	.4270	.4660	.5050	.5440	.5830	.6220	.6610	.7000	.7390	.7780	.8170	.8560	.8950	.9340	.9730	.0100	.0490	.0880	.1270	.1660	.2050	.2440	.2830	.3220	.3610	.4000	.4390	.4780	.5170	.5560	.5950	.6340	.6730	.7120
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CATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AMES 86-030 PRESSURE VENTING - SHUTTLE ORBITER (RECO14)

MACH (8) = 1.127 ALPHA (1) = 6.646

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
90.000	.3392	.3408	.2380											
70.000	.3641	.3653	.2663											
60.000	.3480	.3753	.2755											
50.000		.2956	.0499	-.2213	-.2233	-.1489	.0000	-.1016	-.1566	-.1651	-.1633	-.1590	.0000	-.2033
100.000				-.2375	-.2041	-.1657	-.1436	-.1638	-.1857	-.2285	-.1972	-.2509	-.2035	
110.000				-.2765	-.2615	-.2405	-.2215	-.2514	-.2651	-.2513	-.2591	.0000	-.2497	
120.000					-.2876							.0000		
130.000					-.5027							-.2391		
140.000					-.6997							-.2143		
150.000					-.6658							-.1844		
160.000					-.6173							-.1764		
170.000					-.6169							-.1544		
180.000				-.5310	-.4720	-.3687	-.3272	-.3167	-.2767	-.1756	-.1109	-.0933	-.0883	
X/L	.4500	.4680	.4880	.5050	.5270	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100

PHI														
90.000	-.1934	-.1940	-.1942	-.1544	-.1378	-.1258	.2168	.2188	.2050	.1590	.1045	.0580	-.0173	-.0332
100.000	-.2235	-.2262	-.2036	-.1558	-.1516	-.1486	.1938	.1930	.1910	.1241	.1067	.0457	-.0094	-.0290
110.000	-.2533	-.2098	-.1878	-.1952	-.1882	-.1758	.1670	.1662	.1462	.1235	.0774	.0788	-.0048	-.1267
120.000						-.1710							-.0339	
130.000						.1019							.0277	
140.000						.1163							.0682	
150.000						.1375							.0870	
160.000						.1417							.0763	
170.000						.1494							.1165	
180.000	-.0928	-.0808	-.0560	-.0110	-.0266	.1540	.1624	.1694	.1622	.1522	.1358	.1323	.1223	.1111
X/L	.7280	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					

PHI														
90.000														
70.000														
60.000														
50.000	-.1751	-.1832	-.2046	-.0197	.2180	.0000								
100.000	-.1335	-.1971	-.1243	.1051	.2561	.2180								
110.000	-.1287	-.1184	.0593	.2447	.2941	.2276								
120.000						.2507								
130.000						.2873								
140.000						.0864								
150.000						.1972								
160.000						.2573								
170.000						.2274								
180.000	.1159	.0248	.2712	.3109	.3379	.4359								

DATE 24 MAR 74

AMES 66-030 PRESSURE VENTING - SHUTTLE ORBITER

(REG-14)

$$\text{ALPHA} (0) = 1.000 \quad \text{ALPHA} (2) = 0.737$$

DEPENDENT VARIABLE CP

[illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACH} (0) = 1.099 \quad \text{ALPHA} (3) = 10.000$$

DEPENDENT VARIABLE OF

SECTION () FUSELAGE

[illegible][illegible]

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100																																																																																																																																																													
1990	4.900	4.880	4.860	4.840	4.820	4.800	4.780	4.760	4.740	4.720	4.700	4.680	4.660	4.640	4.620	4.600	4.580	4.560	4.540	4.520	4.500	4.480	4.460	4.440	4.420	4.400	4.380	4.360	4.340	4.320	4.300	4.280	4.260	4.240	4.220	4.200	4.180	4.160	4.140	4.120	4.100	4.080	4.060	4.040	4.020	4.000	3.980	3.960	3.940	3.920	3.900	3.880	3.860	3.840	3.820	3.800	3.780	3.760	3.740	3.720	3.700	3.680	3.660	3.640	3.620	3.600	3.580	3.560	3.540	3.520	3.500	3.480	3.460	3.440	3.420	3.400	3.380	3.360	3.340	3.320	3.300	3.280	3.260	3.240	3.220	3.200	3.180	3.160	3.140	3.120	3.100	3.080	3.060	3.040	3.020	3.000	2.980	2.960	2.940	2.920	2.900	2.880	2.860	2.840	2.820	2.800	2.780	2.760	2.740	2.720	2.700	2.680	2.660	2.640	2.620	2.600	2.580	2.560	2.540	2.520	2.500	2.480	2.460	2.440	2.420	2.400	2.380	2.360	2.340	2.320	2.300	2.280	2.260	2.240	2.220	2.200	2.180	2.160	2.140	2.120	2.100	2.080	2.060	2.040	2.020	2.000	1.980	1.960	1.940	1.920	1.900	1.880	1.860	1.840	1.820	1.800	1.780	1.760	1.740	1.720	1.700	1.680	1.660	1.640	1.620	1.600	1.580	1.560	1.540	1.520	1.500	1.480	1.460	1.440	1.420	1.400	1.380	1.360	1.340	1.320	1.300	1.280	1.260	1.240	1.220	1.200	1.180	1.160	1.140	1.120	1.100	1.080	1.060	1.040	1.020	1.000	0.980	0.960	0.940	0.920	0.900	0.880	0.860	0.840	0.820	0.800	0.780	0.760	0.740	0.720	0.700	0.680	0.660	0.640	0.620	0.600	0.580	0.560	0.540	0.520	0.500	0.480	0.460	0.440	0.420	0.400	0.380	0.360	0.340	0.320	0.300	0.280	0.260	0.240	0.220	0.200	0.180	0.160	0.140	0.120	0.100	0.080	0.060	0.040	0.020	0.000	-0.020	-0.040	-0.060	-0.080	-0.100	-0.120	-0.140	-0.160	-0.180	-0.200	-0.220	-0.240	-0.260	-0.280	-0.300	-0.320	-0.340	-0.360	-0.380	-0.400	-0.420	-0.44

PMI	-1.982	-2.165	-.2274	-.2079	-.0700	2.368	.1297	.1711	.1267	.0520	.0532	-.0316	-.1035	-.1385	.0000
90,000															-.2607
100,000	-.2583	-.2738	-.2927	-.2444	-.0817	2.170	.1587	.1259	.1044	.0029	.0391	-.0365	-.0987	-.1144	-.2607
110,000	-.3399	-.3298	-.3163	-.2034	-.0640	1.648	.0858	.0673	.0312	-.0076	-.0095	-.0794	-.1003	-.1514	-.2682
120,000						.0847								-.1116	
130,000						-.1241								-.0578	
140,000						.0117								-.1415	
150,000						.0378								-.0626	
160,000						.0396								-.0286	
170,000						.5456								.0053	
180,000	-.0182	.0303	.0991	.1380	.1691	.0573	.0787	.0852	.0806	.0795	.1082	.0795	.0340	.0306	.0211

[illegible]

TABULATED SOURCE DATA - 1A29/0A63

DATE 24 MAR 74

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECO14)

MACH (6) = 1.101 ALPHA (4) = 12.920

SECTION (1) FUSELAGE

X/L	0.070	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PM1															
90.000	.2905	.3335	.2787												
70.000	.2769	.3431	.2869												
60.000	.2399	.3129	.2985												
50.000			.3049	.1083	-.1594	-.1465	-.0944	.0000	-.0299	-.0728	-.0897	-.1246	-.1185	.0000	-.1696
100.000						-.1649	-.1310	-.1030	-.0666	-.1040	-.1322	-.1961	-.1907	-.2546	-.2067
110.000						-.2043	-.1763	-.1854	-.1663	-.2075	-.2378	-.2642	-.2781	.0000	-.3020
120.000						-.2779								.0000	
130.000						-.5310								-.3323	
140.000						-.7638								-.2612	
150.000						-.7505								-.1632	
160.000						-.7566								-.1167	
170.000						-.6922								-.0786	
180.000						-.5807	-.4982	-.3654	-.3223	-.2700	-.1910	-.1300	-.0569	-.0384	.0052

X/L	.4900	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PM1															
90.000	-.1629	-.1884	-.2174	-.1846	-.1671	.1723	.2311	.2133	.1582	.0735	.0166	-.0492	-.1407	-.1874	.0000
100.000	-.2702	-.2543	-.2825	-.2483	-.2127	.1794	.2537	.1642	.1366	.0170	.0006	-.0625	-.1423	-.1617	-.2409
110.000	-.3247	-.3112	-.3180	-.2889	-.1430	.1557	.1466	.1031	.0601	-.0016	-.0581	-.1078	-.1474	-.1900	-.2497
120.000						.0575								-.1640	
130.000						-.0315								-.1292	
140.000						.0358								-.0803	
150.000						.1230								-.1149	
160.000						.1580								-.0797	
170.000						.1666								-.0266	
180.000	.0326	.0589	.0801	.1405	.1627	.1678	.1598	.1472	.1212	.0943	.0775	.0427	.0170	-.0020	.0629

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PM1									
90.000									
70.000									
60.000									
50.000	-.3082	-.3489	-.3526	-.3020	-.2013	.0000			
100.000	-.2811	-.3068	-.3272	-.1142	-.0876	-.1259			
110.000	-.2588	-.2755	-.1435	.0356	.0108	-.0925			
120.000						.0924			
130.000						.1364			
140.000						.0952			
150.000						.0712			
160.000						.1919			
170.000						-.0340			
180.000	-.1344	.0252	.1757	.2369	.3521	.5927			

DATE 26 MAR 74

(RECD14)

JAMES 64-630 PRESSURE VENTING - SAWTYLE ORBITER

$$\text{MACM}(\theta) = 1.102 \quad \text{ALPHA}(5) = 15.050$$

SECTION 1115(b)(1)(A)

	.0870	.1860	.2030	.2420	.2840	.2820	.3010	.3190	.3380	.3370	.3730	.3940	.4030	.4310
PMI														
60,000	.2893	.3351												
70,000	.2887	.3275												
80,000	.2811	.2889												
90,000		.3045	.1308	-.1276	-.1238	-.0859	.0000	-.0272	-.0805	-.0891	-.0983	-.1116	.0000	-.1837
100,000					-.1377	-.0965	-.0862	-.0847	-.0891	-.1181	-.1726	-.1717	-.1978	-.2026
110,000					-.1864	-.1824	-.1737	-.1583	-.1964	-.2274	-.2532	-.2731	.0000	-.3006
120,000					-.2688								.0000	
130,000					-.3320								-.4687	
140,000					-.7817								-.3878	
150,000					-.7753								-.2165	
160,000					-.7318								-.1275	
170,000					-.7145								-.0837	
180,000					-.5973	-.4922	-.3950	-.3279	-.2641	-.1859	-.1018	-.0490	-.0341	.0144
Z/L	.4500	.4680	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI														
90,000	-.1824	-.1731	-.2080	-.1667	-.1484	.1332	.2142	.1573	.0587	-.0154	-.0891	-.1588	-.2041	.0000
100,000	-.2193	-.2304	-.2671	-.2269	-.1733	.1703	.1677	.1352	-.0006	-.0249	-.0855	-.1429	-.1823	-.2631
110,000	-.3077	-.3033	-.2884	-.2735	-.1842	.1220	.1010	.0445	-.0220	-.0786	-.1211	-.1386	-.1865	-.2606
120,000					.0245								-.1445	
130,000					-.0632								-.1524	
140,000					-.1757								-.0816	
150,000					.0745								-.1429	
160,000					.1407								-.1126	
170,000	.0489	.1036	.1372	.1582	.1896	.1401	.1256	.0978	.0771	.0669	.0478	.0050	-.0366	.0404
180,000														
Z/L	.7280	.7470	.7850	.8030	.8290	.8620	.9000	.9400						
PMI														
60,000						-.1286								
70,000						-.1150	-.1325	.0000						
80,000						-.0473	-.2303	.0954						
90,000	-.3434	-.3898	-.4034	-.3861	.0000	-.0398	-.1638	.0500						
100,000	-.2779	-.3275	-.3503	-.1722	-.1709									
110,000	-.2859	-.2848	-.1722	.0038	-.1217									
120,000					.0666									
130,000					.1032									
140,000					-.0144									
150,000					.0682									
160,000					.1894									
170,000					-.0402									
180,000	-.1722	-.0841	.1508	.2409	.3302	.3302	.6140							

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A83

AMES 80-830 PRESSURE WENTING - SHUTTLE ORBITER (REC014)

MACH (7) = 1.152 ALPHA (1) = 6.644

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L .0870 .1280 .1640 .2030 .2420 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .3341 .3471 .2612
70.000 .3434 .3743 .2896
80.000 .3308 .3759 .3032
90.000 .3198 .0754 .1768 .1852 .1175 .0000 .0743 .1163 .1274 .1451 .1483 .0000 .2035
100.000 .1984 .1699 .1311 .1120 .1266 .1453 .1888 .1956 .2383 .2096
110.000 .2353 .2168 .2038 .1849 .2131 .2240 .2492 .2572 .0000 .2513
120.000 .2491 .4553 .2340
130.000 .8462 .2123
140.000 .6156 .1887
150.000 .5698 .1840
160.000 .5667 .1775
170.000 .4900 .2871 .2559 .2204 .1824 .1589 .1008
180.000 .4500 .4680 .5050 .5240 .5460 .5610 .5800 .6170 .6360 .6540 .6730 .6880 .7100

X/L

PHI

90.000 .1723 .1681 .1696 .1569 .1388 .1219 .0778 .0184 .0453 .0498 .0058 .0194 .0533 .0897 .0000
100.000 .2107 .2118 .2057 .1685 .1394 .1494 .1149 .0549 .0268 .0177 .0041 .0229 .0618 .0666 .1733
110.000 .2335 .2181 .1876 .1829 .1729 .1764 .1390 .0854 .0236 .0084 .0385 .0556 .0653 .0996 .1783
120.000 .1754 .1754
130.000 .1493 .1493
140.000 .1256 .1256
150.000 .0914 .0914
160.000 .0813 .0813
170.000 .0662 .0662
180.000 .0633 .0899 .0510 .0494 .0443 .0611 .0582 .0528 .0372 .0161 .0052 .0147 .0198 .0318 .0809

X/L

PHI

60.000 .1118
70.000 .0894 .2039 .0000
80.000 .0892 .1151 .2309
90.000 .2173 .2304 .2464 .2341 .0280 .0000 .0884 .0459 .2088
100.000 .1792 .2115 .2206 .0335 .0456 .1200
110.000 .1827 .2074 .0831 .1339 .1253 .1227
120.000 .1656
130.000 .2401
140.000 .0398
150.000 .1386
160.000 .2207
170.000 .1574
180.000 .0172 .1502 .2024 .2320 .2561 .3824

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

AWES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECO14)

MACH (7) = 1.147 ALPHA (2) = 8.722

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP														
X/L		.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI																
60.000		.3190	.3336	.2564												
70.000		.3326	.3565	.2764												
80.000		.3000	.3567	.2962												
90.000			.3198	.2904	-.1777	-.1876	-.1092	.0000	-.0762	-.1274	-.1369	-.1537	-.1507	.0000	-.2152	
100.000						-.2052	-.1611	-.1295	-.1141	-.1303	-.1547	-.2004	-.2085	-.2340	-.2310	
110.000						-.2350	-.2109	-.1960	-.1892	-.2179	-.2594	-.2625	-.2817	.0000	-.2988	
120.000						-.2694								-.3227		
130.000						-.4834								-.2726		
140.000						-.6066								-.2300		
150.000						-.6591								-.2138		
160.000						-.6087								-.1964		
170.000						-.6066								-.1704	-.1127	
180.000						-.5281	-.4578	-.3641	-.3179	-.3019	-.2591	-.2369	-.1945	-.1704	-.7100	
X/L		.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI																
90.000		-.1955	-.1912	-.2247	-.2016	-.1314	-.1748	-.1411	-.1096	-.0639	-.0164	-.0152	-.0370	-.1045	-.1347	.0000
100.000		-.2438	-.2502	-.2622	-.2364	-.2038	-.1837	-.1819	-.1459	-.0730	-.0487	-.0214	-.0349	-.1057	-.1195	-.2064
110.000		-.3013	-.2952	-.2694	-.2640	-.2168	-.2210	-.2078	-.1769	-.1251	-.0641	-.0574	-.0549	-.1158	-.1563	-.2161
120.000							-.2206							-.1800		
130.000							-.1930							-.0942		
140.000							-.1543							-.0726		
150.000							-.1135							-.0796		
160.000							-.1006							-.0312		
170.000							-.0837							-.0036		
180.000		-.0948	-.0822	-.0712	-.0759	-.0723	-.0755	-.0779	-.0777	-.0676	-.0499	-.0028	.0251	.0161	.0245	.0511
X/L		.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PHI																
60.000								.2295								
70.000								.1794	.3476	.0000						
80.000								.1682	.2692	.3171						
90.000		-.2846	-.2761	-.2731	-.2079	-.1386	.0000	.1469	.2169	.2914						
100.000		-.2277	-.2443	-.2313	-.0518	-.0327	.0656									
110.000		-.2333	-.2246	-.0083	.0596	.0583	.0794									
120.000							.1904									
130.000							.2519									
140.000							.0729									
150.000							.1890									
160.000							.2662									
170.000							.1118									
180.000		.0690	.1469	.2102	.2532	.3326	.5020									

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A63

(RECO14)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (7) = 1.149 ALPHA (3) = 10.900

DEPENDENT VARIABLE CP

SECTION (1) FUSELAGE

X/L	.0870	.1260	.1640	.2030	.2420	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.3036	.3287	.2696											
70.000	.2949	.3466	.2869											
80.000	.2417	.3366	.3071											
90.000		.3222	.0977	-.1340	-.1649	-.0948	.0000	-.0606	-.1158	-.1190	-.1326	-.1412	.0000	-.2086
100.000					-.1808	-.1371	-.1125	-.0969	-.1149	-.1394	-.1900	-.2021	-.2558	-.2288
110.000					-.2083	-.1833	-.1788	-.1710	-.2069	-.2317	-.2619	-.2795	.0000	-.3043
120.000					-.2631								.0000	
130.000					-.4840								-.3638	
140.000					-.7016								-.3083	
150.000					-.6819								-.2402	
160.000					-.6366								-.2067	
170.000					-.6282								-.1875	
180.000					-.5465	-.4665	-.3975	-.3241	-.2966	-.2490	-.2268	-.1759	-.1584	-.1195

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.1834	-.2035	-.2334	-.2131	-.2181	-.2295	-.2189	-.1870	-.1328	-.0521	-.0497	-.1199	-.1580	.0000
100.000	-.2481	-.2691	-.2796	-.2581	-.2536	-.2782	-.2663	-.1818	-.1262	-.0836	-.0499	-.0935	-.1405	-.2295
110.000	-.3189	-.3149	-.3192	-.3382	-.3269	-.2928	-.2407	-.2145	-.1680	-.1042	-.0830	-.1372	-.1752	-.2480
120.000					-.2648								-.1825	
130.000					-.3546								-.1334	
140.000					-.1470								-.1269	
150.000					-.1248								-.1221	
160.000					-.1188								-.0408	
170.000					-.0875								-.0346	
180.000	-.0893	-.0818	-.0625	-.0664	-.0658	-.0797	-.0816	-.0908	-.0715	-.0711	-.0439	-.0212	-.0091	.0598

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
60.000							.0260							
70.000							.0335	.2220	.0000					
80.000							.0370	.1285	.2459					
90.000	-.2828	-.3323	-.3134	-.1898	-.1149	.0000	.0005	.0702	.2161					
100.000	-.2548	-.2554	-.3118	.0103	-.0521	-.0905								
110.000	-.2623	-.2940	.0215	.0832	.0296	-.0250								
120.000						.1627								
130.000						.2070								
140.000						.0543								
150.000						.1095								
160.000						.2408								
170.000						.0386								
180.000	-.0015	-.0949	.2222	.2927	.3380	.3374								

JAMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD14)

$$\text{MACH} (7) = 1.151 \quad \text{ALPHA} (4) = 12.910$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

[illegible]

AMES 68-630 PRESSURE VENTING - SHUTTLE ORBITER (REC014)

MACH (P) = 1.152 ALPHA (S) = 15.010

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.2394	.2951	.2687											
70.000	.1981	.2949	.2612											
80.000	.1115	.2922	.2922											
90.000		.3050	.1446	-.1126	-.1312	-.0895	.0000	-.0593	-.0763	-.0983	-.1205	-.1262	.0000	-.1741
100.000				-.1477	-.1100	-.0905	-.0905	-.0915	-.1098	-.1363	-.1692	-.1818	-.2131	-.2100
110.000				-.1836	-.1745	-.1834	-.1712	-.2004	-.2339	-.2523	-.2732	.0000	-.2983	
120.000				-.2489									.0000	
130.000				-.4823									-.3711	
140.000				-.7180									-.4592	
150.000				-.7184									-.3097	
160.000				-.6827									-.2285	
170.000				-.6589									-.1800	
180.000				-.5702	-.4857	-.3769	-.3674	-.3366	-.2799	-.2182	-.1678	-.1368	-.1007	

X/L	.4500	.4860	.5050	.5240	.5461	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100	
PHI														
90.000	-.1749	-.1903	-.2443	-.2246	-.2161	-.2401	-.1968	-.1675	-.0861	-.0234	-.1376	-.1745	-.2158	.0000
100.000	-.2275	-.2415	-.2788	-.2760	-.2833	-.3010	-.2843	-.2697	-.1963	-.1516	-.0195	-.1242	-.1455	-.2670
110.000	-.3071	-.3101	-.3221	-.3481	-.3621	-.3728	-.3453	-.3242	-.2612	-.1395	-.0927	-.1463	-.1665	-.2751
120.000						-.3079							-.1302	
130.000						-.3038							-.0972	
140.000						-.4235							-.0880	
150.000						-.1679							-.1855	
160.000						-.1072							-.0566	
170.000						-.0991							.0011	
180.000	-.0803	-.0598	-.0683	-.0604	-.0529	-.0962	-.1055	-.1121	-.1026	-.0789	.1076	.0950	.0432	.0703

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400	
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PHI										
60.000										
70.000										
80.000										
90.000	-.3425	-.3859	-.3574	-.2554	-.1361	.0000				
100.000	-.2987	-.2900	-.3216	-.0476	-.0272	-.0551				
110.000	-.2925	-.2141	-.1438	.0463	.0866	-.0205				
120.000					.1459					
130.000					.1635					
140.000					.0811					
150.000					.0992					
160.000					.2734					
170.000					.0031					
180.000	-.1038	.0339	-.496	.2636	.4125	.6516				

$$\text{MACM} (7) = 1.149 \quad \text{ALPHA} (8) = 17.120$$

JAMES 88-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD14)

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

K/L	.0870	.1180	.1640	.2030	.2420	.2840	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI															
90.000	.1932	.2396	.2370												
70.000	.1209	.2217	.2522												
80.000	.0424	.1517	.2624												
90.000			.2770	.1069	-.1286	-.1362	-.0845	.0000	-.0486	-.0911	-.1110	-.1215	.0000	-.1823	
100.000						-.1541	-.1196	-.0966	-.0777	-.1005	-.1290	-.1493	-.1807	-.1965	-.2062
110.000						-.1916	-.1621	-.1678	-.1536	-.1998	-.2294	-.2577	-.2777	.0000	-.2927
120.000						-.2600								.0000	
130.000						-.4906								-.6559	
140.000						-.7455								-.5538	
150.000						-.7471								-.4461	
160.000						-.7182								-.2530	
170.000						-.6910								-.1979	
180.000						-.5983	-.4696	-.3982	-.3648	-.3217	-.2324	-.2107	-.1495	-.1458	-.0763
K/L	.4900	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	-.1708	-.1949	-.2312	-.1969	-.2131	-.2083	-.1581	-.0514	.0218	.0212	-.0463	-.1309	-.1988	-.2089	.0000
100.000	-.2348	-.2365	-.2868	-.2746	-.2287	-.2212	-.1795	-.1122	-.0123	-.0230	-.0635	-.1179	-.1766	-.1912	-.2703
110.000	-.3198	-.3200	-.3324	-.3170	-.3496	-.3407	-.2940	-.2362	-.0236	-.0401	-.0734	-.1552	-.1593	-.1998	-.2399
120.000						-.2494								-.1218	
130.000						-.3197								-.1012	
140.000						-.4691								-.0625	
150.000						-.2072								-.1665	
160.000						-.0748								-.0934	
170.000						-.0703								-.0156	
180.000	-.0996	-.0497	-.0620	-.0267	-.0172	-.0518	.1248	-.0014	.0996	.1006	.1664	.0763	.0541	.0835	.1101
K/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PMI															
90.000															
70.000															
80.000															
90.000															
100.000	-.3665	-.4081	-.4119	-.2169	-.1759	.0000	-.1813	-.4048	.0000						
110.000	-.2752	-.2843	-.2084	-.0498	-.0577	-.1204	-.2603	-.3111	.0227						
120.000	-.2456	-.1960	-.0138	.0707	.0225	-.0750	-.1546	-.2574	-.2641						
130.000							-.0470								
140.000							.1132								
150.000							.1333								
160.000							.0461								
170.000							.0716								
180.000							.3098								
170.000							.0384								
180.000	-.0569	.0120	.2223	.3106	.4330	.7267									

$$\text{MACH} (8) = 1.248 \quad \text{ALPHA} (1) = 6.545$$

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD14)

SECTION (1) FUSELAGE
DEPENDENT; VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4030	.4310
PHI															
60.000	.2629	.2995	.2731												
70.000	.3029	.3169	.3021												
80.000	.2565	.3429	.3291												
90.000			.3569	.1216	-.1166	-.1480	-.1032	.0000	-.0683	-.1086	-.1099	-.1230	-.1123	.0000	-.1591
100.000						-.1521	-.1482	-.1180	-.0981	-.1131	-.1262	-.1619	-.1582	-.1950	-.1719
110.000						-.1776	-.1814	-.1834	-.1617	-.1866	-.1986	-.2085	-.2155	.0000	-.2172
120.000						-.1829								.0000	
130.000						-.3725								-.2728	
140.000						-.5505								-.2307	
150.000						-.5218								-.1967	
160.000						-.4764								-.1933	
170.000						-.4802								-.1973	
180.000						-.4245	-.3790	-.3292	-.2755	-.2615	-.2429	-.2295	-.2036	-.1910	-.1513
X/L	.4500	.4680	.4860	.5030	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1334	-.1461	-.1662	-.1468	-.1449	-.1531	-.1235	-.1019	-.0605	-.0323	-.0181	-.0693	-.0716	-.0877	.0000
100.000	-.1747	-.1899	-.1869	-.1664	-.1609	-.1675	-.1441	-.1292	-.0772	-.0890	-.0321	-.0643	-.0751	-.0712	-.1252
110.000	-.2159	-.2016	-.1934	-.2030	-.1840	-.1865	-.1651	-.1542	-.1265	-.0979	-.0686	-.0820	-.0878	-.0996	-.1363
120.000						-.2193								-.1435	
130.000						-.1823								-.1030	
140.000						-.1492								-.0716	
150.000						-.1153								-.0583	
160.000						-.0976								-.0447	
170.000						-.0854								-.0301	
180.000	-.1258	-.1091	-.0940	-.0872	-.0812	-.0791	-.0796	-.0796	-.0785	-.0764	-.0635	-.0559	-.0348	-.0140	.0403

(RECO14)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (8) = 1.249 ALPHA (2) = 8.683

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1260	.1640	.2030	.2420	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
60.000	.2625	.2716	.2669											
70.000	.2701	.2797	.2927											
80.000	.2065	.2723	.3263											
90.000			.3591	.1370	-.1076	-.1342	-.0875	.0000	-.0359	-.1018	-.1192	-.1082	.0000	-.1623
100.000					-.1412	-.1289	-.1023	-.0849	-.1040	-.1194	-.1599	-.1583	-.2008	-.1769
110.000					-.1638	-.1625	-.1630	-.1514	-.1818	-.1964	-.2108	-.2243	.0000	-.2383
120.000					-.1841								.0000	
130.000					-.3778								-.3354	
140.000					-.5710								-.2728	
150.000					-.5478								-.2188	
160.000					-.5028								-.2082	
170.000					-.5026								-.2015	
180.000					-.4496	-.4014	-.3366	-.2850	-.2742	-.2515	-.2326	-.2038	-.1858	-.1386

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
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PHI

90.000	-.1418	-.1578	-.1839	-.1712	-.1782	-.1928	-.1758	-.1575	-.1235	-.0859	-.0587	-.0944	-.1340	-.1270	.0000
100.000	-.1886	-.2109	-.2179	-.2084	-.2074	-.2285	-.2094	-.1851	-.1285	-.1238	-.1591	-.0914	-.1270	-.1101	-.1665
110.000	-.2474	-.2488	-.2524	-.2698	-.2655	-.2613	-.2232	-.1928	-.1672	-.1406	-.1125	-.1129	-.1399	-.1379	-.1822
120.000					-.2571									-.1794	
130.000					-.2269									-.1270	
140.000					-.1597									-.1252	
150.000					-.1225									-.1089	
160.000					-.1087									-.0645	
170.000					-.0921									-.0639	
180.000	-.1155	-.1075	-.0878	-.0893	-.0859	-.0846	-.0865	-.0887	-.0876	-.0854	-.0775	-.0650	-.0544	-.0465	-.0013

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI

60.000							.0532		
70.000							.0360	.2091	.0000
80.000							-.0127	.1149	.2406
90.000	-.2117	-.2578	-.2541	-.2964	-.1939	.0000	-.0678	.0332	.2172
100.000	-.1806	-.2335	-.2394	-.1743	-.0549	-.0606			
110.000	-.1899	-.2277	-.2240	.0272	.0517	.0175			
120.000						.1834			
130.000						.2338			
140.000						.0268			
150.000						.1623			
160.000						.2264			
170.000						.0760			
180.000	-.0367	.0326	.1362	.2030	.2621	.4353			

AMES 64-630 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACH} (8) = 1.232 \quad \text{ALPHA} (3) = 10.760$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

[illegible]

Pw1

60,000	.2376	.2340	.2394
70,000	.2176	.2491	.2628
80,000	.1657	.2276	.3007
90,000			.3520

[illegible]

7/8

[illegible]

	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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11

[illegible]

AMES 64-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECU14)

MACH (8) = 1.250 ALPHA (5) = 14.990

SECTION (1) FUSELAGE DEFENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
90.000	.1346	.2183	.1814											
70.000	.1291	.1967	.1836											
60.000	.0799	.1287	.1872											
50.000		.2393	.1691	-.0686	-.1012	-.0700	.0000	-.0419	-.0508	-.0676	-.0845	-.0939	.0000	-.1365
40.000				-.1197	-.1006	-.0779	-.0609	-.0794	-.1028	-.1309	-.1448	-.1659	-.1714	
30.000				-.1385	-.1324	-.1369	-.1275	-.1624	-.1890	-.2110	-.2299	.0000	-.2532	
20.000				-.1853								.0000		
10.000				-.3929								-.6135		
0.000				-.6040								-.4689		
10.000				-.6100								-.3235		
20.000				-.5832								-.2555		
30.000				-.5596								-.2267		
40.000				-.5036	-.4399	-.3598	-.3227	-.3075	-.2701	-.2403	-.2013	-.1835	-.1450	
X/L	.4300	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
PHI														
90.000	-.1308	-.1578	-.1854	-.1769	-.1720	-.1939	-.1720	-.1414	-.1333	-.1343	-.1064	-.1803	-.2425	.0000
80.000	-.1852	-.2013	-.2167	-.2064	-.2123	-.2375	-.2166	-.2162	-.1649	-.1953	-.1419	-.1895	-.2447	-.2797
70.000	-.2644	-.2835	-.2688	-.2826	-.2803	-.3042	-.2924	-.2934	-.2448	-.2354	-.2167	-.2333	-.2496	-.2780
60.000						-.4353							-.2152	
50.000						-.4563							-.2214	
40.000						-.5216							-.2464	
30.000						-.1990							-.3132	
20.000						-.1102							-.1542	
10.000						-.1122							-.0989	
0.000	-.1377	-.1333	-.1069	-.1121	-.1068	-.0969	-.1020	-.1154	-.1234	-.0943	-.0973	-.0861	-.0812	-.0037
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
90.000														
80.000														
70.000														
60.000														
50.000	-.3330	-.3759	-.3768	-.3901	-.2562	.0000								
40.000	-.2879	-.3187	-.3443	-.2660	-.1366	-.1608								
30.000	-.2595	-.2925	-.2560	-.0615	-.0516	-.0919								
20.000						.0696								
10.000						.0764								
0.000						-.0123								
10.000						-.0745								
20.000						-.2327								
30.000						-.0141								
40.000	-.1372	-.1019	-.0930	.2395	.3591	.6085								

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC014)

MACH (0) = 1.749 ALPHA (0) = 17.100

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2820 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

90.000 .1928 .2093 .1693
 70.000 .0486 .1753 .1604
 80.000 .0290 .1078 .1531
 90.000 .1617 .1774 -.0396 -.0898 -.0675 .0000 -1.3600 -1.3040 -1.3150 -1.3130 -.0869 .0000 -.1566
 100.000 .1185 -.0915 .0000 -1.3140 -1.3170 -1.3400 -1.3620 -.1233 -.1481 -.1496
 110.000 -.1406 -.1309 .0000 -1.3780 -1.4060 -1.4210 -.2017 -.2214 .0000 -.2370
 120.000 -.1921
 130.000 -.3912
 140.000 -.6137
 150.000 -.6284
 160.000 -.6026
 170.000 -.5760
 180.000 -.5205 -.4486 .0000 -1.5910 -1.5680 -1.5230 -.2434 -.1996 -.1847 -.1312

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.1237 -.1423 .0000 -1.4360 -1.4340 -1.4460 -.1552 -.1550 -.1537 -.1515 -.1183 -.9658 -1.5000 -1.4770 .0000
 100.000 -.1707 -.2080 .0000 -1.4650 -1.4750 -1.4690 -.2080 -.2085 -.1683 -.2141 -.1534 .0000 -1.4590 -1.4340 -.2818
 110.000 -.2497 -.6436 -1.5890 -1.5620 -1.5470 -1.5740 -.2668 -.2729 -.2331 -.2484 -.2306 .0000 -1.4640 -1.4740 -.2960
 120.000 -1.6960
 130.000 -.4705
 140.000 -.5065
 150.000 -.3080
 160.000 -.1031
 170.000 -.0962
 180.000 -.0831 -.0831 -.0831 -.1239 -.1304 -.1239 .0000 -1.3540 -1.3430 -.0824

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

90.000 -1.5660
 70.000 -1.6380 -1.4880 .0000
 80.000 -1.6410 -1.4100 -1.4740
 90.000 -.3591 -.4117 -.4282 -.4371 -.3469 .0000 -1.5310 -1.4410 -1.4050
 100.000 -.3077 -.3536 -.3799 -.2946 -.1947 -.2189
 110.000 -.2898 -.3129 -.2382 -.0989 -.1004 -1.3320
 120.000 -1.8420
 130.000 -1.8060
 140.000 .0000
 150.000 -1.2900
 160.000 -.9934
 170.000 -1.2640
 180.000 -1.4500 -1.1199 -.1199 .2260 .3603 -.5497

AMES 86-630 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACM} (9) = 1.400 \quad \text{ALPHA} (1) = 0.449$$

DEPENDENT VARIABLE CP

Y/L	.0870	.1200	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3730	.3940	.4050	.4310
PMI															
80,000	.2693	.2326	.1973												
90,000	.2763	.2406	.2053												
100,000	.2833	.2466	.2113												
110,000				.1860	-.0494	-.0907	-.0681	.0000	-.0350	-.0704	-.0661	-.0616	-.0736	.0000	-.1184
120,000						-.0655	-.0934	-.0769	-.0646	-.0724	-.0850	-.1144	-.1151	-.1461	-.1284
130,000						-.1103	-.1135	-.1297	-.1160	-.1372	-.1471	-.1566	-.1644	.0000	-.1673
140,000						-.1043								.0000	
150,000						-.2763								-.2582	
160,000						-.4329								-.2355	
170,000						-.4131								-.1949	
180,000						-.3737								-.1689	
190,000						-.3780								-.1916	
200,000						-.3545	-.3136	-.2859	-.2503	-.2274	-.2145	-.2092	-.1975	-.1935	-.1752

PMI	-0.0979	-0.1037	-0.1171	-0.1060	-0.1118	-0.1240	-0.1146	-0.1081	-0.0743	-0.0390	-0.0700	-0.0922	-0.1183	0.0000
90,000	-0.0979	-0.1037	-0.1171	-0.1060	-0.1118	-0.1240	-0.1146	-0.1081	-0.0743	-0.0390	-0.0700	-0.0922	-0.1183	0.0000
100,000	-0.1310	-0.1443	-0.1447	-0.1323	-0.1273	-0.1441	-0.1403	-0.1303	-0.1126	-0.1090	-0.0725	-0.0834	-0.1026	-0.1168
110,000	-0.1701	-0.1603	-0.1655	-0.1672	-0.1610	-0.1781	-0.1699	-0.1574	-0.1454	-0.1238	-0.0940	-0.0870	-0.1210	-0.1361
120,000						-0.2096							-0.1550	
130,000						-0.1922							-0.1163	
140,000						-0.1675							-0.0934	
150,000						-0.1308							-0.0817	
160,000						-0.1092							-0.0738	
170,000						-0.0899							-0.0672	
180,000	-0.1536	-0.1407	-0.1076	-0.1023	-0.0924	-0.0804	-0.0813	-0.0793	-0.0782	-0.0771	-0.0725	-0.0713	-0.0540	-0.0141

[illegible]

JAMES 68-030 PRESSURE VENTING - SHUTTLE ORBITER

(016, 38)

$$\text{MACM} (9) \approx 1.493 \quad \text{ALPHA} (2) = 0.531$$

DEPENDENT VARIABLE CF

2007 JUN 11 1 00:11 PM

[illegible]

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD12)

MACH : 9) = 1.401 ALPHA (3) = 10.650

SECTION (1) FUSELAGE

[illegible]

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.0911	-.1040	-.1203	-.1198	-.1283	-.1301	-.1372	-.1345	-.1230	-.1129	-.0938	-.1304	-.1545	-.1854	.0000
100.000	-.1304	-.1415	-.1474	-.1525	-.1545	-.1799	-.1704	-.1729	-.1504	-.1628	-.1252	-.1475	-.1659	-.1823	-.1966
110.000	-.1963	-.1971	-.1980	-.2055	-.2044	-.2271	-.2195	-.2175	-.2125	-.2042	-.2001	-.1507	-.1875	-.2113	-.2098
120.000						-.4245								-.2215	
130.000						-.3486								-.2278	
140.000						-.1722								-.1931	
150.000						-.1473								-.0987	
160.000						-.1261								-.0898	
170.000						-.0994								-.1164	
180.000	-.1368	-.1283	-.1049	-.1038	-.0974	-.0901	-.0922	-.0895	-.0915	-.0935	-.0909	-.0886	-.0895	-.0830	-.0310

W/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PMI									
60.000							-.1303		
70.000							-.1503	-.0835	.0000
80.000							-.1475	-.1437	.0823
90.000							-.1356	-.1491	-.0235
100.000	-.2241	-.2563	-.2655	-.2771	-.2791	.0000			
110.000	-.1906	-.2246	-.2514	-.2704	-.1154	-.1348			
120.000	-.1963	-.2227	-.2439	-.0733	-.0077	-.0116			
130.000						.1937			
140.000						.1941			
150.000						.0480			
160.000						-.0098			
170.000						.2278			
180.000						.1092			
190.000	-.1302	-.0645	.0294	.1536	.2327	.4403			

DATE 24 MAR 74

(REC314)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

$$\text{MACH} (4) = 1.462 \quad \text{ALPHA} (4) = 12.720$$

DEPARTMENT OF AGRICULTURE

[illegible]

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/OA63

AWES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECD14)

MACM (9) = 1.400 ALPHA (5) = 14.870

SECTION (1) FUSELAGE		DEPENDENT VARIABLE CP														
X/L		.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PMI																
60.000		.2296	.2245	.1750												
70.000		.1931	.2043	.1704												
80.000		.0994	.1373	.1633												
90.000			.1464	.1464	.1497	-.0181	-.0497	-.0314	.0000	-.0043	-.0083	-.0196	-.0788	-.0454	.0000	-.0840
100.000							-.0673	-.0567	-.0453	-.0142	-.0283	-.0320	-.0728	-.0855	-.1056	-.0985
110.000							-.0714	-.0884	-.0859	-.0690	-.1033	-.1228	-.1409	-.1581	.0000	-.1802
120.000							-.1164								.0000	
130.000							-.2886								-.4949	
140.000							-.4772								-.4422	
150.000							-.4963								-.2989	
160.000							-.4752								-.2338	
170.000							-.4529								-.2089	
180.000							-.4236	-.3825	-.3259	-.2848	-.2781	-.2517	-.2299	-.2020	-.1881	-.1634
X/L		.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI																
90.000		-.0873	-.0995	-.1171	-.1030	-.1215	-.1405	-.1287	-.1265	-.1141	-.1245	-.0917	-.1113	-.1844	-.1941	.0000
100.000		-.1268	-.1486	-.1570	-.1488	-.1612	-.1782	-.1690	-.1708	-.1496	-.1780	-.1324	-.1420	-.1755	-.2062	-.2174
110.000		-.1842	-.1912	-.1888	-.2080	-.2137	-.2397	-.2241	-.2173	-.2186	-.2130	-.2081	-.2022	-.2000	-.2447	-.2500
120.000							-.4341								-.2927	
130.000							-.4852								-.2480	
140.000							-.4506								-.2653	
150.000							-.2499								-.3067	
160.000							-.1596								-.1690	
170.000							-.1083								-.1195	
180.000		-.1361	-.1372	-.1052	-.1109	-.1202	-.1061	-.1096	-.0961	-.1040	-.1260	-.1171	-.1083	-.0993	-.1052	-.0692
X/L		.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9100						
PMI																
60.000																
70.000																
80.000																
90.000		-.2324	-.2899	-.3133	-.3469	-.3785	.0000									
100.000		-.2354	-.2697	-.3061	-.3051	-.1895	-.1760									
110.000		-.2554	-.2792	-.2802	-.1118	-.0830	-.1104									
120.000							.0725									
130.000							.0246									
140.000							-.0489									
150.000							-.1024									
160.000							.2153									
170.000							-.0253									
180.000		-.1377	-.1106	-.1028	.0988	.3212	.5799									

DATE 24 MAR 74
TABULATED SOURCE DATA - 1A29/OA63

(REC'D 14)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (10) = 1.500 ALPHA (3) = 10.000

DEPENDENT VARIABLE: CP

SECTION (1) FUSELAGE

	.0679	.1260	.1840	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4050	.4310
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PMI

60,000	.2599	.1844
70,000	.2184	.1903
80,000	.1777	.1968
90,000		.2049
100,000		
110,000		
120,000		
130,000		
140,000		
150,000		
160,000		
170,000		
180,000		

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	.7100
	.6880
	.6730
	.6540
	.6360
	.6170
	.5980
	.5800
	.5610
	.5460
	.5240
	.5050
	.4860
	.4690
	.4500

FBI

Year	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412
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.7290	.7470	.7670	.7850	.8030	.8291	.8620	.9000	.9400
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14

[illegible]

(RECD14)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (10) = 1.500 ALPHA (4) = 12.710

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI														
90.000	.2526	.2256	.1837											
70.000	.1867	.2152	.1812											
60.000	.1369	.1792	.1502											
50.000		.1330	.1670	.0070	-.0336	-.0130	.0000	.0155	.0092	.0061	-.0033	-.0181	.0000	-.0473
100.000					-.0438	-.0316	-.0121	.0022	-.0078	-.0205	-.0341	-.0553	-.0733	-.0776
110.000					-.0456	-.0478	-.0344	-.0458	-.0691	-.0891	-.1036	-.1163	.0000	-.1412
120.000					-.0699								.0000	
130.000					-.2236								-.3914	
140.000					-.4010								-.3466	
150.000					-.4088								-.2503	
160.000					-.3824								-.2087	
170.000					-.3681								-.1968	
180.000					-.3532	-.3198	-.2855	-.2476	-.2351	-.2212	-.2089	-.1921	-.1816	-.1489
X/L	.4500	.4880	.4680	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6880	.7100
PHI														
90.000	-.0500	-.0631	-.0826	-.0801	-.0881	-.1050	-.1018	-.0991	-.1009	-.0972	-.0734	-.0866	-.1255	-.1474
100.000	-.0670	-.0996	-.1121	-.1122	-.1155	-.1366	-.1342	-.1392	-.1262	-.1431	-.1090	-.1134	-.1284	-.1508
110.000	-.1482	-.1485	-.1541	-.1631	-.1653	-.1877	-.1805	-.1833	-.1840	-.1803	-.1748	-.1639	-.1581	-.1842
120.000						-.4135							-.2441	
130.000						-.4535							-.2571	
140.000						-.2074							-.3295	
150.000						-.1739							-.1653	
160.000						-.1406							-.1234	
170.000						-.1090							-.0987	
180.000	-.1279	-.1189	-.1005	-.0992	-.0935	-.0870	-.0874	-.0370	-.0919	-.0958	-.0880	-.0903	-.0864	-.0539
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400					
PHI														
90.000							-.2375							
70.000							-.2464	-.1378	.0000					
60.000							-.1944	-.1739	-.0904					
50.000							-.1663	-.1872	-.1875					
100.000	-.1940	-.2296	-.2421	-.2761	-.2757	.0000								
110.000	-.1854	-.2156	-.2471	-.2701	-.1836	-.1180								
120.000	-.2098	-.2347	-.2545	-.1227	-.0471	-.0459								
130.000						.1537								
140.000						.1093								
150.000						-.0851								
160.000						-.1196								
170.000						.1885								
180.000						-.0051								
190.000	-.1030	-.0913	-.0833	.0967	.2778	.5208								

(RECD14)

AMES 66-830 PRESSURE VENTING - SHUTTLE ORBITER

MACH (10) = 1.499 ALPHA (5) = 14.830

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1240 .1640 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3730 .3940 .4050 .4310

PHI

60.000 .2412 .2293 .1617
 70.000 .1634 .2090 .1747
 80.000 .1062 .1591 .1677
 90.000 .1564 .1310 .0116
 100.000 .0415 -.0313 -.0079 .0000 .0073 .0084 .0060 -.0019 -.0033 .0000 -.0434
 110.000 -.0463 -.0456 -.0517 -.0420 -.0670 -.0833 -.0974 -.1114 .0000 -.1327
 120.000 -.0709
 130.000 -.2270
 140.000 -.4074
 150.000 -.4226
 160.000 -.4004
 170.000 -.3613
 180.000 -.3636

X/L

.4500 .4680 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.0443 -.0600 -.0793 -.0747 -.0639 -.1026 -.0983 -.0976 -.0989 -.0894 -.0666 -.0890 -.1269 -.1600 .0000
 100.000 -.0818 -.1023 -.1162 -.1090 -.1127 -.1344 -.1318 -.1351 -.1261 -.1373 -.1031 -.1114 -.1221 -.1582 -.1709
 110.000 -.1420 -.1465 -.1526 -.1638 -.1664 -.1895 -.1805 -.1835 -.1775 -.1705 -.1605 -.1550 -.1872 -.2100
 120.000
 130.000 -.4286
 140.000 -.4200
 150.000 -.2191
 160.000 -.1885
 170.000 -.1021
 180.000 -.1266 -.1026 -.1070 -.1003 -.0928 -.0987 -.0999 -.1021 -.1063 -.0961 -.1006 -.0947 -.0895 -.0677

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

60.000
 70.000
 80.000
 90.000 -.2019 -.2352 -.2595 -.2699 -.2924 .0000
 100.000 -.1868 -.2225 -.2540 -.2621 -.2139 -.1430
 110.000 -.2126 -.2423 -.2637 -.1410 -.0779 -.0715
 120.000 .0375
 130.000 .0495
 140.000 -.0535
 150.000 -.0819
 160.000 .2118
 170.000 -.0469
 180.000 -.1186 -.1032 -.1030 -.0212 .2750 .5579

$$\text{MACH (17)} = 1.499 \quad \text{ALPHA (8)} = 16.890$$

DEPENDENT VARIABLE CP

[illegible][illegible]

X/L	.4500	.4680	.4860	.5050	.5240	.5430	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PMI															
90.000	-.0402	-.0566	-.0737	-.0876	-.0798	-.0954	-.0872	-.0878	-.0847	-.0810	-.0732	-.0789	-.1242	-.1630	.0000
100.000	-.0778	-.1031	-.1065	-.1019	-.1071	-.1296	-.1235	-.1281	-.1105	-.1246	-.1022	-.1055	-.1185	-.1502	-.1745
110.000	-.1407	-.1426	-.1466	-.1594	-.1643	-.1858	-.1752	-.1748	-.1732	-.1635	-.1662	-.1576	-.1496	-.1838	-.2083
120.000						-.3643								-.2892	
130.000						-.3945								-.2715	
140.000						-.4757								-.2380	
150.000						-.3878								-.2763	
160.000						-.2417								-.2515	
170.000						-.1322								-.1576	
180.000	-.1412	-.1316	-.1047	-.1152	-.1046	-.0915	-.1000	-.0997	-.1020	-.1151	-.1112	-.1160	-.1166	-.1214	-.1093
X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						

[illegible]

JAMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

PARAMETRIC DATA

BETA	=	-2.000	ELEVTR	=	-15.000
AILRON	=	.000	RUDDER	=	.000
RN/L	=	2.250			

REFERENCE DATA

3REP	=	.0000 SQ. IN.	XMRP	=	.0000 IN.
LEP	=	.0000 IN.	YMRP	=	.0000 IN.
BREP	=	.0000 IN.	ZMRP	=	.0000 IN.
SCALE	=	.0150 SCALE			

$$\alpha(1) = 0.441$$
[illegible]

PHI	.0870	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4030	.4310
60.000	.2044	.1715	.1160												
70.000	.1910	.1756	.1249												
80.000	.1790	.1715	.1303												
90.000			.1606	.0951	-.0265	-.0360	-.0515	.0000	-.0317	-.0454	-.0393	-.0426	-.0446	-.0675	-.0667
100.000						-.0351	-.0565	-.0523	-.0457	-.0529	-.0596	-.0704	-.0709	-.0830	-.0844
110.000						-.0668	-.0716	-.0813	-.0632	-.0977	-.1033	-.1057	-.1082	-.0969	-.1152
120.000						-.0568								-.1032	
130.000						-.1746								-.1656	
140.000						-.2727								-.1484	
150.000						-.2373								-.1298	
160.000						-.2367								-.1265	
170.000						-.2426								-.1262	
180.000						-.2443	-.2049	-.1615	-.1456	-.1425	-.1345	-.1351	-.1340	-.1323	-.1196

[illegible][illegible]

JAMES 00-030 PRESSURE VENTING - SHUTTLE ORBITER

(RECD15)

$$\text{MACH} (1) = 1.750 \quad \text{ALPHA} (1) = 0.441$$

SECTION (1) FUSELAGE

W/L	.7290	.7470	.7670	.7830	.8030	.8290	.8620	.9000	.9400
PWT									
130.000						.2606			
140.000						.1116			
150.000						.467			
160.000						.2191			
170.000						.1812			
180.000	-.1119	-.1296	-.0219	.1426	.2406	.4310			

MACH (1) = 1.750 ALPHA (2) = 10.450

SECTION (1) FUSELAGE

IX/L	.0470	.1260	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3360	.3570	.3750	.3940	.4030	.4310
PMI															
60,000	.1979	.1653	.1123												
70,000	.1669	.1650	.1163												
80,000	.1491	.1526	.1249												
90,000			.1447	.0664	-.0259	-.0532	-.0434	.0000	-.0270	-.0292	-.0273	-.0320	-.0371	-.0686	-.0592
100,000					-.0537	-.0537	-.0409	-.0317	-.0376	-.0434	-.0596	-.0614	-.0763	-.0827	
110,000					-.0532	-.0532	-.0559	-.0637	-.0657	-.0654	-.0960	-.0999	-.1066	-.0872	-.1167
120,000					-.0493									-.0952	
130,000					-.1660								-.2048		
140,000					-.2774								-.1760		
150,000					-.2674									-.1442	
160,000					-.2456									-.1442	
170,000					-.2509									-.1442	
180,000					-.2504	-.2112	-.1767	-.1606	-.1572	-.1489	-.1481	-.1423	-.1414	-.1207	
/L	.4300	.4680	.4660	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100

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90,000	-.0011	-.0661	-.0706	-.0733	-.0813	-.0938	-.0967	.0000	-.1052	-.1035	-.0869	-.1027	-.1190	.0000
100,000	-.0669	-.0977	-.0974	-.0977	-.0991	-.1121	-.1170	-.1251	-.1204	-.1324	-.1122	-.1029	-.1190	-.1337
110,000	-.1279	-.1313	-.1345	-.1370	-.1384	-.1453	-.1507	-.1524	-.1516	-.1518	-.1440	-.1294	-.1139	-.1362
20,000						-.2170							-.1288	
30,000						-.1297							-.1544	
40,000						-.1046							-.0878	
50,000						-.0866							-.0661	
60,000						-.0737							-.0630	
70,000						-.0633							-.0552	
80,000	-.1021	-.0699	-.0636	-.0653	-.0378	-.0554	-.0563	-.0577	-.0518	-.0532	-.0484	-.0462	-.0464	-.0355

	K/L				
0.7290	.7470	.7650	.6030	.8290	.9490

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DATE 26 MAR 74 TABULATE" SOURCE DATA - 1A29/OA63

(RECO13)

AMES 64-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (1) = 1.749 ALPHA (3) = 12.600

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.4500	.4600	.4800	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
Phi															
60.000															
70.000															
80.000															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

-.0777
-.0634
-.0504
-.0437

X/L .7790 .7470 .7170 .6850 .6530 .6290 .6020 .5800 .5600 .5400 .5200 .5000 .4800 .4600 .4400 .4200

Phi															
60.000															
70.000															
80.000															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

-.2407
-.2309
-.2245
-.2074
-.1766
-.2013
-.1600
-.2043
-.0793
-.2262
-.0793
-.0980
-.0622
-.1207
-.1151
-.0505
-.0764
-.2596
-.2021
-.5421

MACH (1) = 1.749 ALPHA (4) = 14.570

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
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Phi															
60.000															
70.000															
80.000															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

-.0912
-.0796
-.0779
-.0762
-.1222
-.0812
-.2432
-.2314
-.1744
-.1577
-.1461
-.1422
-.1164
-.6880
-.7100

X/L .4500 .4600 .4800 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

Phi

DATE 24 MAR 74
TABULATED SOURCE DATA - 1A29/OA63

WFO 88-010 PRESSURE VENTING - SHUTTLE ORBITER (RECOIS)

$$\text{NACH} (1) = 1.749 \quad \text{ALPHA} (5) = 16.605$$

SECTION (1)	USEPAGE	DEPENDENT VARIABLE CP
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
55	55	55
56	56	56
57	57	57
58	58	58
59	59	59
60	60	60
61	61	61
62	62	62
63	63	63
64	64	64
65	65	65
66	66	66
67	67	67
68	68	68
69	69	69
70	70	70
71	71	71
72	72	72
73	73	73
74	74	74
75	75	75
76	76	76
77	77	77
78	78	78
79	79	79
80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

x/L	.0875	.1290	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
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PMI

PHI	- .2920
160.000	- .2850
170.000	- .2850
180.000	- .2850

- .1684
- .1485
- .1391 - .1138

xx

[illegible]

FMI

PMI	-0.0598	-0.0679	-0.0754	-0.0784	-0.0776	-0.0909
90,000						
100,000	-0.0795	-0.0934	-0.0964	-0.0970	-0.0978	-0.1120
110,000	-0.1247	-0.1275	-0.1311	-0.1303	-0.1375	-0.1475
120,000						-0.2661

-	.1203	.0000
-	.1056	-.1442
-	.1355	-.1579
-	.1721	
-	.1808	

100.000

180,000	-.1034	-.0959	-.0773	-.0779	-.0754	-.0726	-.0763	-.0875	-.0735	-.0740	-.0707	-.0752	-.0766	-.0623	-.0739
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74.70	76.50	.8030	.8290	.8620	.9000	.9400
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PMI

FWI				
60,000	-	2886		
70,000	-	3278		
80,000	-	2808		
90,000	-	2170		
	1000		2517	
	1000		2550	

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC016) (16 OCT 73)

REFERENCE DATA

BREF = .0000 SQ. IN. YMRP = .0000 IN.
 LREF = .0000 IN. YMRP = .0000 IN.
 BREF = .0000 IN. ZMRP = .0000 IN.
 SCALE = .0193 SCALE

MACH (1) = 1.599 ALPHA (1) = 6.436

PARAMETRIC DATA

BETA = -4.000 ELEVTR = -15.000
 AILRON = .000 RUDDER = .000
 RN/L = 3.500

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1240	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4050	.4310
PHI															
60.000	.2214	.2160	.1539												
70.000	.2316	.2279	.1778												
80.000	.2090	.2323	.2132												
90.000		.2987	.1428	.1043	.0000	-.1204	-.0812	.0000	-.0691	-.1045	-.1015	-.1102	-.1003	-.1500	-.1403
100.000				-.1202	-.1300	-.1143	-.0976	-.1091	-.1189	-.1444	-.1401	-.1684	-.1522		
110.000				-.1490	-.1539	-.1677	-.1566	-.1727	-.1783	-.1793	-.1850	.0000	-.1950		
120.000				-.1395									.0000		
130.000				-.3070									-.2270		
140.000				-.4440									-.1961		
150.000				-.4153									-.1760		
160.000				-.3759									-.1804		
170.000				-.3783									-.1804		
180.000				-.3587	-.2945	-.2649	-.2388	-.2238	-.2103	-.2066	-.1911	-.1806	-.1520		

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6730	.6880	.7100
PHI															
90.000	-.1231	-.1323	-.1457	-.1360	-.1411	-.1465	-.1385	-.1303	-.1088	-.0899	-.0585	-.0811	-.0964	-.1304	.0000
100.000	-.1528	-.1746	-.1654	-.1500	-.1463	-.1627	-.1568	-.1452	-.1181	-.1239	-.0753	-.0787	-.0891	-.1082	-.1228
110.000	-.1990	-.1818	-.1726	-.1759	-.1709	-.1755	-.1650	-.1579	-.1475	-.1321	-.1138	-.1018	-.0917	-.1169	-.1395
120.000					-.1840									-.1182	
130.000					-.1598									-.0844	
140.000					-.1329									-.0740	
150.000					-.1011									-.0736	
160.000					-.0854									-.0630	
170.000					-.0759									-.0555	
180.000	-.1330	-.1165	-.0843	-.0877	-.0769	-.0714	-.0656	-.0677	-.0677	-.0649	-.0656	-.0624	-.0583	-.0534	-.0367

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
PHI									
60.000									
70.000									
80.000									
90.000	-.1542	-.0351	-.0912	-.2103	-.1362	.0000			
100.000	-.1553	-.1544	-.1763	-.1356	-.0058	-.0272			
110.000	-.1316	-.1529	-.1336	.0451	.0890	.0378			
120.000						.2204			

X/L	.0841	.1126	.1162	.0000	.1831	.1252
PHI						
60.000						
70.000						
80.000						
90.000						
100.000						
110.000						
120.000						

(RECD16)

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

MACH (1) = 1.399 ALPHA (1) = 6.438

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

130.000 .2860
140.000 .0842
150.000 .1818
160.000 .2387
170.000 .0942
180.000 -.1245 -.1433 .1465 .2016 .2394 .3417

MACH (1) = 1.400 ALPHA (2) = 8.561

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2640 .3010 .3190 .3380 .3570 .3750 .3940 .4050 .4310

PHI

60.000 .2122 .2030 .1459
70.000 .2023 .2126 .1634
80.000 .1734 .2036 .1817
90.000 .2304 .1653 -.0716 -.1094 -.0870 .0000 -.0569 -.0974 -.0918 -.1029 -.1091 -.1463 -.1355
100.000 .1100 -.1156 -.0961 -.0844 -.0974 -.1084 -.1370 -.1357 -.1656 -.1539
110.000 .1344 -.1409 -.1498 -.1406 -.1616 -.1723 -.1816 -.1882 .0000 -.2009
120.000 .1364
130.000 .3071
140.000 .4604
150.000 .4369
160.000 .3936
170.000 .3956
180.000 .3721 -.3085 -.2790 -.2491 -.2373 -.2205 -.2129 -.1945 -.1844 -.1436

X/L

.4500 .4660 .4860 .5050 .5240 .5460 .5610 .5800 .5980 .6170 .6360 .6540 .6730 .6880 .7100

PHI

90.000 -.1201 -.1318 -.1494 -.1457 -.1554 -.1698 -.1656 -.1637 -.1525 -.1359 -.1014 -.1245 -.1293 -.1679 .0000
100.000 -.1577 -.1811 -.1777 -.1749 -.1769 -.2002 -.1973 -.1951 -.1624 -.1645 -.1114 -.1129 -.1237 -.1411 -.1667
110.000 -.2098 -.2094 -.2107 -.2232 -.2232 -.2379 -.2215 -.2089 -.1857 -.1615 -.1491 -.1345 -.1306 -.1520 -.1804
120.000 -.2353
130.000 -.1949
140.000 -.1417
150.000 -.1108
160.000 -.0947
170.000 -.0794
180.000 -.1242 -.1068 -.0798 -.0875 -.0765 -.0710 -.0738 -.0710 -.0755 -.0750 -.0727 -.0690 -.0673 -.0636 -.0595

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9400

PHI

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(REC016)

$$\text{MACM} (1) \approx 1.450 \quad \text{ALPHA} (2) = 0.561$$

SECTION (1) FUSELAGE	DEPENDENT VARIABLE CP
1	0.0000
2	0.0000
3	0.0000
4	0.0000
5	0.0000
6	0.0000
7	0.0000
8	0.0000
9	0.0000
10	0.0000
11	0.0000
12	0.0000
13	0.0000
14	0.0000
15	0.0000
16	0.0000
17	0.0000
18	0.0000
19	0.0000
20	0.0000
21	0.0000
22	0.0000
23	0.0000
24	0.0000
25	0.0000
26	0.0000
27	0.0000
28	0.0000
29	0.0000
30	0.0000
31	0.0000
32	0.0000
33	0.0000
34	0.0000
35	0.0000
36	0.0000
37	0.0000
38	0.0000
39	0.0000
40	0.0000
41	0.0000
42	0.0000
43	0.0000
44	0.0000
45	0.0000
46	0.0000
47	0.0000
48	0.0000
49	0.0000
50	0.0000
51	0.0000
52	0.0000
53	0.0000
54	0.0000
55	0.0000
56	0.0000
57	0.0000
58	0.0000
59	0.0000
60	0.0000
61	0.0000
62	0.0000
63	0.0000
64	0.0000
65	0.0000
66	0.0000
67	0.0000
68	0.0000
69	0.0000
70	0.0000
71	0.0000
72	0.0000
73	0.0000
74	0.0000
75	0.0000
76	0.0000
77	0.0000
78	0.0000
79	0.0000
80	0.0000
81	0.0000
82	0.0000
83	0.0000
84	0.0000
85	0.0000
86	0.0000
87	0.0000
88	0.0000
89	0.0000
90	0.0000
91	0.0000
92	0.0000
93	0.0000
94	0.0000
95	0.0000
96	0.0000
97	0.0000
98	0.0000
99	0.0000
100	0.0000

M/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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III

[illegible]
$$\text{MACH} (1) = 1.400 \quad \text{ALPHA} (3) = 10.650$$

SECTION (1) FUSELAGE

x/L	.0070	.1280	.1640	.2030	.2420	.2640	.2920	.3190	.3380	.3570	.3750	.3940	.4050	.4310
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[illegible]

III

[illegible]

DATE 24 MAR 74

TABULATED SOURCE DATA - 1A29/OA83

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECO16)

MACH (1) = 1.400 ALPHA (3) = 10.850

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.4500	.4680	.4860	.5050	.5240	.5460	.5610	.5800	.6170	.6360	.6540	.6730	.6880	.7100
Phi														
60.000														
70.000														
80.000														
90.000														
100.000														
110.000														
120.000														
130.000														
140.000														
150.000														
160.000														
170.000														
180.000														

X/L	.7200	.7470	.7670	.7850	.8030	.8290	.8620	.9500	.9400
Phi									
60.000									
70.000									
80.000									
90.000									
100.000									
110.000									
120.000									
130.000									
140.000									
150.000									
160.000									
170.000									
180.000									

MACH (2) = 1.500 ALPHA (1) = 6.331

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1280	.1640	.2030	.2420	.2640	.2620	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
Phi															
60.000															
70.000															
80.000															
90.000															
100.000															
110.000															
120.000															
130.000															
140.000															
150.000															
160.000															
170.000															
180.000															

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AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECO10)

MACM (2) = 1.500 ALPHA (1) = 6.331

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

PHI	4500	4600	4800	5000	5200	5400	5610	5800	5980	6170	6380	6540	6730	6880	7100
90.000	-0.0893	-0.1009	-0.1144	-0.1073	-0.1142	-0.1234	-0.1169	-0.1143	-0.1077	-0.0944	-0.0623	-0.0736	-0.0930	-0.1047	0.0000
100.000	-0.1193	-0.1390	-0.1642	-0.1293	-0.1223	-0.1363	-0.1391	-0.1342	-0.1132	-0.1223	-0.0809	-0.0754	-0.0900	-0.0798	-0.1334
110.000	-0.1572	-0.1945	-0.2408	-0.1536	-0.1508	-0.1598	-0.1549	-0.1450	-0.1377	-0.1295	-0.1171	-0.1045	-0.0913	-0.1006	-0.1372
120.000						-0.1751								-0.1145	
130.000						-0.1560								-0.0831	
140.000						-0.1320								-0.0758	
150.000						-0.1006								-0.0703	
160.000						-0.0836								-0.0617	
170.000						-0.0732								-0.0533	
180.000	-0.1318	-0.1196	-0.0832	-0.0621	-0.0728	-0.0670	-0.0646	-0.0629	-0.0562	-0.0355	-0.0487	-0.0507	-0.0304	-0.0491	-0.0406

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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60,000	-.0699	-.0408	-.0947	-.1926	-.1392	.0000	-.0812
70,000	-.1263	-.1262	-.1610	-.1496	-.0017	-.0076	-.1179
80,000	-.1076	-.1394	-.1312	.0353	.0692	.0612	-.0944
90,000						.2496	-.0710
100,000						.3046	
110,000						.0936	
120,000						.1699	
130,000						.2166	
140,000						.0938	
150,000	-.1162	-.1314	.1357	.1066	.2244	.3062	

$$\text{MACH} (2) = 1.504 \quad \text{ALPHA} (2) = 0.556$$

SECTION (1) FUSELAGE

DEPENDENT VARIABLE CP

[illegible]

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/OA83

(REC018)

AMES 64-63D PRESSURE VENTING - SHUTTLE ORBITER

MACH (2) = 1.304 ALPHA (2) = 0.556

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L .0870 .1280 .1640 .2030 .2420 .2840 .3010 .3190 .3380 .3570 .3750 .3940 .4030 .4310

PMI

90.0000 -.3271
100.0000 -.3295
110.0000 -.3192
120.0000 -.2656
130.0000 -.2242
140.0000 -.2108
150.0000 -.2013
160.0000 -.1797
170.0000 -.1693
180.0000 -.1425

X/L

.4500 .4880 .4880 .5050 .5240 .5460 .5610 .5800 .6170 .6360 .6540 .6730 .6880 .7100

PMI

90.0000 -.0823
100.0000 -.0951
110.0000 -.1073
120.0000 -.1032
130.0000 -.1217
140.0000 -.1372
150.0000 -.1320
160.0000 -.1349
170.0000 -.1280
180.0000 -.1214
190.0000 -.1110
200.0000 -.0971
210.0000 -.1070
220.0000 -.1439
230.0000 -.1183
240.0000 -.1103
250.0000 -.1306
260.0000 -.1214
270.0000 -.1466
280.0000 -.1718
290.0000 -.1333
300.0000 -.1397
310.0000 -.0965
320.0000 -.0631
330.0000 -.0837
340.0000 -.0717
350.0000 -.0534
360.0000 -.0574

X/L

.7290 .7470 .7670 .7850 .8030 .8290 .8620 .9000 .9430

PMI

90.0000 -.1309
100.0000 -.1694
110.0000 -.1694
120.0000 -.1694
130.0000 -.1694
140.0000 -.1694
150.0000 -.1694
160.0000 -.1694
170.0000 -.1694
180.0000 -.1694
190.0000 -.1694
200.0000 -.1694
210.0000 -.1694
220.0000 -.1694
230.0000 -.1694
240.0000 -.1694
250.0000 -.1694
260.0000 -.1694
270.0000 -.1694
280.0000 -.1694
290.0000 -.1694
300.0000 -.1694
310.0000 -.1694
320.0000 -.1694
330.0000 -.1694
340.0000 -.1694
350.0000 -.1694
360.0000 -.1694

JAMES 06-030 PRESSURE VENTING - SHUTTLE ORBITER

(REC'D 16)

$$\text{MACH } (2) = 1.501 \quad \text{ALPHA } (3) = 10.000$$

SECTION (1) FUSelage

[illegible]

DATE 24 MAR 74 TABULATED SOURCE DATA - 1A29/0A03

AMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER (RECO18)

MACH (2) = 1.459 ALPHA (4) = 12.650

SECTION (1) FUSELAGE DEPENDENT VARIABLE CP

X/L	.0870	.1290	.1640	.2030	.2420	.2840	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PHI														
90.000	.2161	.1697	.1503											
70.000	.1639	.1732	.1540											
80.000	.1293	.1565	.1580											
90.000		.1374	.1370	-.0179	-.0610	-.0432	.0000	-.0219	-.0327	-.0103	-.0389	-.0266	-.1174	-.0816
100.000					-.0601	-.0544	-.0494	-.0376	-.0463	-.0551	-.0664	-.0662	-.0909	-.1096
110.000					-.0824	-.0723	-.0792	-.0866	-.1063	-.1007	-.1260	-.1476	.0000	-.1660
120.000					-.0997								.0000	
130.000					-.2317								-.3916	
140.000					-.4150								-.3043	
150.000					-.4106								-.2151	
160.000					-.3732								-.1969	
170.000					-.3705								-.1649	
180.000					-.3363	-.2916	-.2724	-.2469	-.2310	-.2017	-.2057	-.1876	-.1723	-.0999

X/L	.4500	.4680	.4860	.5030	.5240	.5460	.5610	.5800	.5960	.6170	.6360	.6540	.6730	.6880	.7100
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PHI															
90.000	-.0816	-.0783	-.1031	-.1105	-.1193	-.1213	-.1364	-.1386	-.1395	-.1306	-.1168	-.1274	-.1615	-.1946	.0000
100.000	-.1001	-.1236	-.1396	-.1420	-.1448	-.1556	-.1501	-.1730	-.1609	-.1596	-.1467	-.1486	-.1643	-.1833	-.2131
110.000	-.1814	-.1763	-.1769	-.1804	-.1744	-.2132	-.2135	-.2175	-.2177	-.2150	-.1993	-.1990	-.1931	-.2046	-.2133
120.000					-.3548								-.1931		
130.000					-.4552								-.1526		
140.000					-.1562								-.2612		
150.000					-.1324								-.1294		
160.000					-.1035								-.0867		
170.000					-.0682								-.0768		
180.000	-.0942	-.0970	-.0783	-.0620	-.0765	-.0747	-.0741	-.0732	-.0787	-.0626	-.0679	-.0739	-.0775	-.0801	-.0706

X/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400
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PHI									
90.000							-.2432		
70.000							-.2704	-.1715	.0000
80.000							-.2347	-.1270	-.1205
90.000	-.2200	-.0617	-.1690	-.3042	-.2670	.0000	-.1922	-.1862	-.2285
100.000	-.2314	-.2169	-.2563	-.2676	-.1269	-.1241			
110.000	-.2202	-.2345	-.2122	-.0757	-.0561	-.0693			
120.000						.1211			
130.000						.1050			
140.000						.0523			
150.000						-.0441			
160.000						.2453			
170.000						.1562			
180.000	-.2176	-.2329	-.0644	.1769	.3098	.5751			

JAMES 66-630 PRESSURE VENTING - SHUTTLE ORBITER

(RECD10)

$$\text{MACM} (2) = 1.500 \quad \text{ALPHA} (5) = 14.750$$

SECTION (1) PURCHASE

Z/L	.0870	.1280	.1640	.2030	.2420	.2640	.2820	.3010	.3190	.3380	.3570	.3750	.3940	.4030	.4310
PMI															
80.000	.2080	.1970	.1559												
90.000	.1434	.1795	.1500												
100.000	.0966	.1400	.1447												
110.000		.1375	.1066	-.0159	-.0518	-.0432	.0000	-.0231	-.0229	-.0249	-.0320	-.0371	-.1066	-.0727	
120.000					-.0505	-.0627	-.0481	-.0278	-.0354	-.0470	-.0615	-.0699	-.0875	-.0938	
130.000					-.0743	-.0810	-.0841	-.0716	-.0950	-.1113	-.1221	-.1351	.0000	.0000	
140.000					-.0978								-.4219	-.3461	
150.000					-.2480								-.3461	-.2358	
160.000					-.4177								-.2042	-.1831	
170.000					-.4242								-.1576	-.1199	
180.000					-.5972										
190.000					-.3825										
200.000					-.3604	-.3084	-.2742	-.2452	-.2325	-.2161	-.1977	-.1718	-.1576	-.1199	
Z/L	.4500	.4680	.4880	.5050	.5240	.5460	.5610	.5800	.5980	.6170	.6360	.6540	.6880	.7100	
PMI															
90.000	-.0873	-.0678	-.1047	-.1011	-.1137	-.1323	-.1270	-.1261	-.1316	-.1221	-.1157	-.1254	-.1503	.0000	
100.000	-.1386	-.1337	-.1375	-.1341	-.1404	-.1618	-.1592	-.1638	-.1526	-.1665	-.1459	-.1413	-.1506	-.2057	
110.000	-.1672	-.1683	-.1753	-.1855	-.1888	-.2109	-.2082	-.2096	-.2045	-.2053	-.2038	-.1992	-.1843	-.2389	
120.000						-.3461							-.2117	-.2117	
130.000						-.4132							-.2024	-.2024	
140.000						-.3524							-.2420	-.2420	
150.000						-.2053							-.2310	-.2310	
160.000						-.1064							-.1276	-.1276	
170.000						-.0870							-.0996	-.0996	
180.000	-.1056	-.0970	-.0700	-.0768	-.0736	-.0689	-.0722	-.0729	-.0786	-.0846	-.0867	-.0848	-.0841	-.0874	
Z/L	.7290	.7470	.7670	.7850	.8030	.8290	.8620	.9000	.9400						
PMI															
80.000							-.2676								
90.000							-.3570	-.3441	.0000						
100.000							-.2971	-.2982	-.2434						
110.000	-.2347	-.1066	-.2266	-.3196	-.3010	.0000			-.2740						
120.000	-.2365	-.2296	-.2742	-.2749	-.1644	-.1649									
130.000	-.2191	-.2431	-.2171	-.0819	-.0751	-.1130									
140.000						.0679									
150.000						.0514									
160.000						-.0099									
170.000						-.0197									
180.000						.2359									
190.000						.1494									
200.000	-.2226	-.2456	-.0818	.0103	.2947	.6015									

LABULATED SOURCE DATA - 1A29/0A63

DATE 20 MAR 74

(REC'D 10)

JAMES 04-030 PRESSURE VENTING - SHUTTLE ORBITER

$$\alpha_{\text{PMA}}(\theta) = 1.951 \quad \alpha_{\text{PMA}}(\theta) = 10.050$$

DEPENDENT VARIABLE CP

SECTION (1) FURNACE

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100																																																																																																																																											
1990	1.290	1.440	1.600	1.760	1.920	2.080	2.240	2.400	2.560	2.720	2.880	3.040	3.200	3.360	3.520	3.680	3.840	4.000	4.160	4.320	4.480	4.640	4.800	4.960	5.120	5.280	5.440	5.600	5.760	5.920	6.080	6.240	6.400	6.560	6.720	6.880	7.040	7.200	7.360	7.520	7.680	7.840	8.000	8.160	8.320	8.480	8.640	8.800	8.960	9.120	9.280	9.440	9.600	9.760	9.920	10.080	10.240	10.400	10.560	10.720	10.880	11.040	11.200	11.360	11.520	11.680	11.840	12.000	12.160	12.320	12.480	12.640	12.800	12.960	13.120	13.280	13.440	13.600	13.760	13.920	14.080	14.240	14.400	14.560	14.720	14.880	15.040	15.200	15.360	15.520	15.680	15.840	16.000	16.160	16.320	16.480	16.640	16.800	16.960	17.120	17.280	17.440	17.600	17.760	17.920	18.080	18.240	18.400	18.560	18.720	18.880	19.040	19.200	19.360	19.520	19.680	19.840	20.000	20.160	20.320	20.480	20.640	20.800	20.960	21.120	21.280	21.440	21.600	21.760	21.920	22.080	22.240	22.400	22.560	22.720	22.880	23.040	23.200	23.360	23.520	23.680	23.840	24.000	24.160	24.320	24.480	24.640	24.800	24.960	25.120	25.280	25.440	25.600	25.760	25.920	26.080	26.240	26.400	26.560	26.720	26.880	27.040	27.200	27.360	27.520	27.680	27.840	28.000	28.160	28.320	28.480	28.640	28.800	28.960	29.120	29.280	29.440	29.600	29.760	29.920	30.080	30.240	30.400	30.560	30.720	30.880	31.040	31.200	31.360	31.520	31.680	31.840	32.000	32.160	32.320	32.480	32.640	32.800	32.960	33.120	33.280	33.440	33.600	33.760	33.920	34.080	34.240	34.400	34.560	34.720	34.880	35.040	35.200	35.360	35.520	35.680	35.840	36.000	36.160	36.320	36.480	36.640	36.800	36.960	37.120	37.280	37.440	37.600	37.760	37.920	38.080	38.240	38.400	38.560	38.720	38.880	39.040	39.200	39.360	39.520	39.680	39.840	40.000	40.160	40.320	40.480	40.640	40.800	40.960	41.120

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[illegible]

2

PMI	-0.0704	-0.0817	-0.0904	-0.0955	-0.1041	-0.1248	-0.1219	-0.1241	-0.1256	-0.1239	-0.1146	-0.1190	-0.1484	-0.1675	-0.0000
90.0000														-0.1661	-0.2087
100.0000	-0.1049	-0.1319	-0.1359	-0.1286	-0.1320	-0.1556	-0.1548	-0.1597	-0.1440	-0.1619	-0.1327	-0.1350	-0.1431	-0.1991	-0.2374
110.0000	-0.1594	-0.1626	-0.1722	-0.1833	-0.1838	-0.2060	-0.2055	-0.2059	-0.2034	-0.1984	-0.1959	-0.1902	-0.1741	-0.2263	
120.0000						-0.3206								-0.2085	
130.0000						-0.3692								-0.2114	
140.0000						-0.4743								-0.2864	
150.0000						-0.2905								-0.1942	
160.0000						-0.1568								-0.1405	
170.0000						-0.0940									
180.0000	-0.1016	-0.0939	-0.0700	-0.0824	-0.0763	-0.0728	-0.0779	-0.0848	-0.0965	-0.1049	-0.1033	-0.1091	-0.1093	-0.1126	-0.1237

7290	7470	7670	7850	8030	8290	8620	9000	9400
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[illegible]